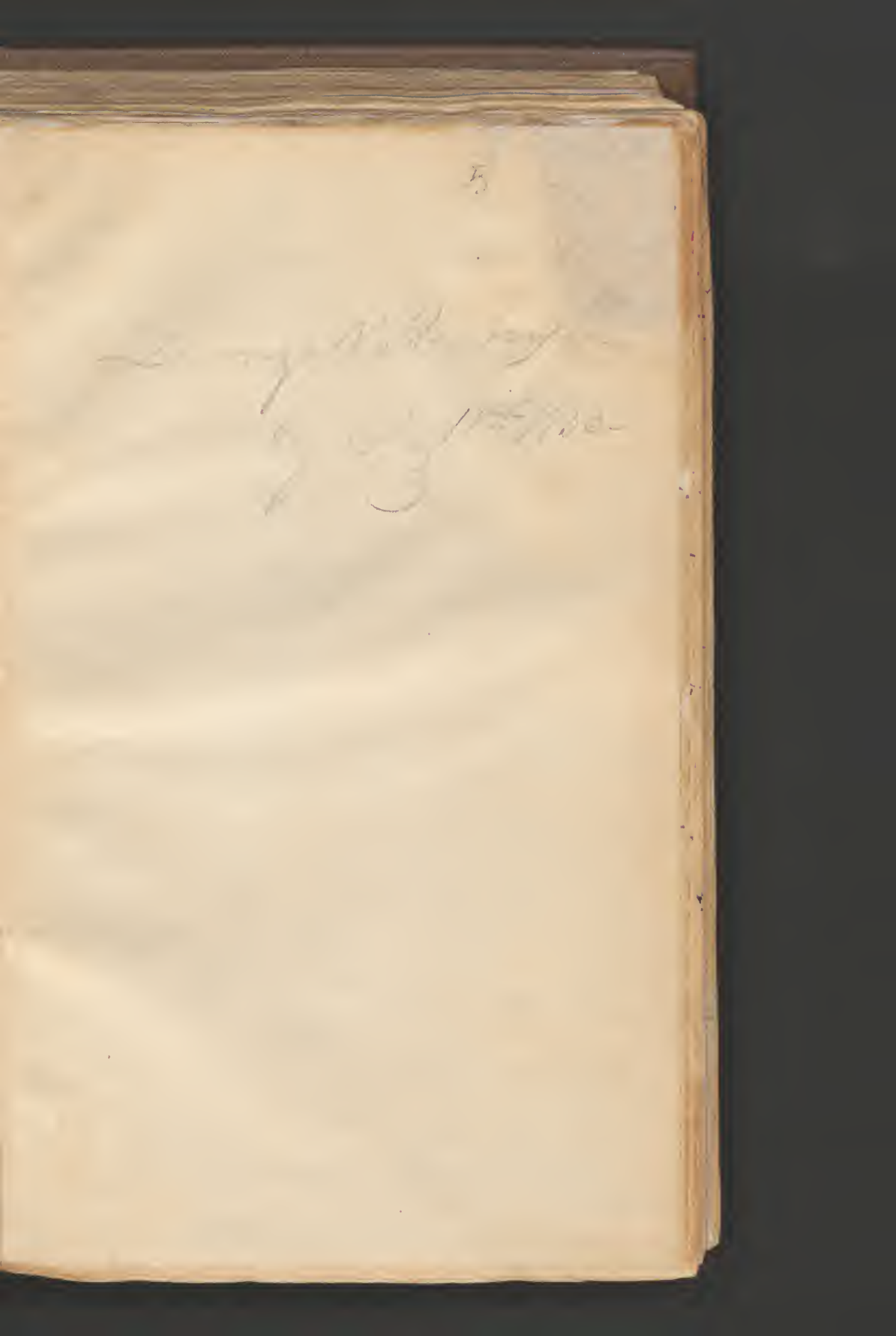

Notes in Lectures on the Theory & Practice of Medicine, delivered by Daniel Drake — 1831-1

On organic & inorganic life — animate & inanimate beings.

Life is dependent on organization — with respect to this organization — how did it originate — as respects minerals chemical attractions exert a considerable influence in their organizations. It has produced the crystalline forms. This constitutes the vital powers — in formation of sulphate soda. There is an affinity between the sulph. acid & soda — & a new body is formed — having taste, figure &c.

In animal life there must be something else added

to organization. This is Nature
Doing something which we call
vital force. It wil act its
in motion & keeps in play
all the organs. To understand
this machine we
must take it a part &
examine each separately.
In all mach: it is a point
wh we can take hold
of & contemplate this
structure but in. No
human mechanism we
dont know where to
begin. It is a multi-
tude of parts each dean.
ing of equal importance
to the whole. The same
substance is found every
where. If we cut in any
part pain is prod: & blood

will flow - Hence blood & nerves are everywhere. Emaciation takes place in all our organs - Hence absorbents - dwell everywhere. But all these are cemented by the cellular tissue. These three blood vessels, nerves, absorbents & cellular membrane are found everywhere. Now when you strip from the human Neck: (the blood vessels & nerves) & what will you have left? A mere capsule. Nothing wanted to represent life. All the tissues which you will find in books, are found in every one. Nerves universal nerve. Blood vessels - they are accidental formations of the nerves. Nerves with some few distinctions.

The blood vessels are all connected - all coming to or-

ifurcate & terminate at the heart — completing a complete circle. There is continually two columns of blood — one going from & the other returning to the heart. & then again every nerve is con: with the brain & spinal marrow either directly or indirectly — no matter how remote the parts — even to the cuticle of the toes. When and it is sensibility the must be nervous.

Weakness then was taken of the human system when first it a constitution of <u>nerves</u>, <u>arteries</u>, <u>muscles</u> &c. Take away other disease away & yet one we will fall. Think of tears. The circulation might go on. Take ase the other

among, & you will find — an animal capable of existing & performing in some degree, the part which we have to do.

The various conductors of the blood vessels, nerves &c. may be compared to a hollow tree & its branches — all forming & constituting organs, performing their proper functions. They are the component parts of all our organs.

We know the embryo is a fluid mass — that from this the fetus is builded up. — I do not mean to say the nerves & blood vessels from the brain & like the branches of a tree — but that they are finally conjoined & constitute one whole.

You might enquire into the relative importance of these two objects. Now what end the animal creation for? If we view ourselves as intellectual beings & looking to the pleasures of mind & noble, commanding intellectual gratifications, we would say that the nerves of the heart & the circulating & that the blood vessels were to supply their wants. But here we to consider our social relations. That this was the great end of our being we might be led to this conclusion. The vegetable tribes seems wholly employed in forming & obtaining these fluids. When we consider the destiny of man, his powers, his

his gay imagination. We might consider the nervous system his every thing. This gives him the eye that sees, the mind that thinks & feels. The nervous, absorbent & system &c are but mere subordinate agents. The mere slaves of the nervous system. This is the height, the dignified & grand function of man. Take out the nervous mat: for the animal body & you reduce man to a mere plant. One is the lowest rank of the chain of creation.

In taking this a priori view this seems to me the most useful way of coming at the organizations of the human body. You must not

project each organ. Contin
please each of you wise
find this modification
of the same thing. Modif:
of the set of tissues. In
this mod: not only dif:
of form results but also
dif: in function. But
is this dif: of form or
interlacing the only cause
of the dif: of funct:. This
may be the only remote
cause, but it is not
the approximate cause.
That susceptibility wh I
have before spoken of has
undergone modif: or heca=
bitation. The part is
susceptible to one impress
& another to a dif: sus=
ceptibility to impression.
It is a modified suscepti=

bility. The cellular tissue has been called the primary tissue of the body. To it several membranes are said to have something else added. The skin is the great covering membrane. It is only the part of the integument that intervenes. For when we come to the mouth we find the membrane undergoes some change. Instead having covering it is changed into a mucous surface covered with pile or a villous coat. This is internal as relates to the skin but in relation to other organs it is external, as the intestines. These two are modifications of one and same tissue. The skin is totally uniform throughout the whole and thus. The mucous membranes are not so defined or bounded. The vital properties are various.

The adhesion of these membranes is very great. The lips, accounts with the first change of mucous membrane from skin.

It lines the nostrils - the tubes
the oesophagus. stomach. intestines
&c. It may be lost entirely
in the venous system. This
instantly takes place in Ma-
ny cancerous tubes. At the time
of the plastic we again meet
with the mucous membr. &
from this point it extends
itself over the bronchial tubes
Here its ramifications are
astonishing to great. At the
pelvic region we again meet
with the mucous membr. &
line the vagina of the female.
the uterus. the bladder. the
ureters, &c up to the Kid-
neys. terminating in its pelvis.
In descending to the mucous membr.
of lungs we might begin
at the nares. This is the
schneiderian lining &c.
Mr Cachymaer dwells. the
confusion of the eye the

can also has the external
tegumentary membrane. This
is rather a dipping in of the
other. Not a mucous membr.

Now between the muc=
ous membr: & the tegumentary
membr: we have a variety of
organs. To know we must
dissect to understand pathol=
ogy. Internally we have no
serous membr: it is noth=
ing but condensed cellular=
adhering only ~~attached~~ blood=
& destined to perform no
particular function. We have
the in the pelvis, abdomen: in
brain. No thorax. They are
complete bags. The consti.
a covering for the viscera.
especially in the abdomen.
So when anyone of the
organs comes to get in it
is like the contact of two

full bags. A fluid ex-
udes from the broad
surface. While the mu-
cous membr: & skin are
exposed to the contact of
foreign agents, the serous
membr: are entirely ex-
cluded from external
objects. But wh they are
subjected to the external
world they become dis-
eased. We are many
other systems, but to this
we is not my hand to
speak of. I will now
be content with some
of the more particu-
lar. The uterine system
of the glandular organs,
as well the mucous shall
have occasion to do. We
are conscious of repeated

To the belong the liver, spleen, kidneys &c. They are said to be parenchymatous organs: but upon the exam: the minutely we will find the composed of secreting vessels. & vessels going to supply these secretory processes. The liver is made up of the vessels of the vena porta, hepatic veins & ducts, pori biliari &c, bound together by cellular memb:. There are glands about the mouth, called the salivary glands. These are noth: more than vessels rolled up & bound up with cellular tissue. In body we are presented with the vascular system. Now what are we to think when we have been previously told that these structures are made up of these very vessels

These vessels are made up of the first primary tissue. The heart is made up of the muscular tissues. We are to look upon the human body as composed of a no: of hydraulic tubes rolled & convoluted into various forms. Therefore in studying these different tissues of wh I have been speaking, you have been but studying the vascular tissue. It matters no matter when you begin. The same remark applies to the nervous system. In prop: as the vessels become smaller the amount of nervous matter wh they are in connection becomes greater & greater. Therefore wh you have been

studying these tissues you have not been neglecting the nervous tissues. For if you strike these organs out of existence you will have no nervous tissue to study.

Besides these there are other subordinate tissues. We have the osseous tissues. They consist of cellular or vascular tissue, filled up with a concretion of the phosphate of lime. The muscular - the fibrous - the tissues are simplified in the same manner. The analytical elements vary in the proportion. These aggregates make up the animal body. All the diff. organs are nothing more than so many masses of organized matter - They have no degree of elasticity about them do they. They therefore must have had a capacity diff. while performing the functions, from an animal. This did form life.

A diff. of pressure acted under

the tongues are destroy life.
This part produces any dis-
organization - all remains whole.
yet the consequences have
been death of the related functions.

Nothing is more mysterious
than the principle of action
life & the instances which
is destroyed by heat & cold
as I have mentioned. There
is a power or capability
being acted on & producing
certain operations & functions.
We are as ignorant of this
power, as the power which built
up these structures. Now
this capacity is found in no
particular part but is uni-
versal. If any part had
it over it would be
an excrescence. It might be
cut off. If this character say
the brain, reason. Farther
demons have been written
to expel, & this capacity
as invariably are credited.

sensibility — this has been so many times used in the present MS. A person is said to be irritable when he is irritable by causes by which other persons are not affected. He is said to be easily excited. By our own feeling we judge of this. We judge of it by our consciousness. The word contractility expresses the power to contract or abbreviate a muscle or a muscular alone position. The word sensibility has been used to express the but some of those parts which are capable of having cognizance of certain impressions. There is no certain principle to which sensibility is referred. Because that calls the sensibility of the heart organic sensibility or sensibility in general. No teacher is

able to affect the mind
of any one of this description.
They are in all the books
and synonimous. Some
have a partiality for one
more than an other tastes. They
are all referable to simple
we call tastes. When we
bring potash we in only
acid - we say there is a dis-
position to unite. Why one
potash do so with soda &c.
we say know the fact we
dont know the cause. An
Escharotic acts on the skin.
Densibility - castor oil or
water on it & no pain
is experienced. Here there
is a capability of acting
on the skin substances.
different - but produce
different effects when applied
to different parts. This
is true in all tastes &c.

defy of sensibility.

It is sufficient for us to know that this capacity of being acted upon, has apparently existed every where thro our bodies.

Now I would wish to know if there is any organ from wh this capability is referable. This seems in some degree to exist in the cellular tissue. This forms a covering into all the organs & tissues. This came from the parent. It might seem that all the sensibility of the system generally depended. They first had it because they were made up from it — but once having it they no longer depend upon. The cellular tissue seems peculiarly to have lost its sensibility to foreign agents & in some measure to resemble dead matter.

We have no reason to suppose
the absurdest rebels supply
this principle. The carry
of the Pneumatikos mat.
Therefore they cannot be the
depositories & communica-
tors of this capability. Nor
can it rest in the being
They carry the blood wh
is no longer fit to remain
in the organs. The demons
blood cannot sustain his
dependence. There are
but two systems on wh
the capacity can depend
the arteries & the nerves
The brain & spinal mar-
row from which the
nerves are sent off
direct by immediately
to know his finished
as course. Cut off the

supply of arterial blood
to the part diseased. The same
may be said of the nerves.
Therefore it is evident that
the systems are essentially
necessary to life, at least
principle of life. But is
it the blood or is it
the tubes wh carry the
blood? The arteries are
nothing but aorta or pipes
to carry onward the
column of blood. Stagna-
tion is when tubes fear.
In one part its velocity
may be diff. - but still
it goes onward up hill
& down hill until it
reaches the venous radicals
wh carry it back to the
heart. Now it is more
than probable that the
blood wh pervades the

whole system, keeps up a
mandamus his capability of
the organs of being acted on.
If it is allowed in a de-
gree, that organic bodies in
functions & if allowed
to remain need the organs
rise. The blood must be
circulating — it must be
passing onward. There is
no such a thing as de-
tention of blood — it must
draw its life by means
of the being — But the same
blood may be returned to
the organs to perform the
same task. It must pre-
viously do this return to the
lungs. There it becomes
decarbonized or in com-
mon parlance it throws
out into the atmosphere of

the of charcoal. We must
suppose that the blood is ex-
posed to the lungs acc
quires something in it, it
for comes this capability, but
yet this is the event. Now

Now we come to the
nervous system. The nervous
syst: is composed of a
large mass arranged in cord.
The brain, the cerebellum &
the cerebrum & medulla &c
are composed of two white fibres
filaments & juicy. The
nerves, the brain &c are
enveloped by strong nervous
membrane. The envelopes
may be compared to the
peritoneum. Now we may say the
the nervous power is not
resident in these tunics
but must reside in the

fully mat. This nervous
mat. like the blood is
continuous & uninterrup-
ted. Not like the blood
it remains motionless.
The medulla oblongata seems
to correspond to the heart.
All the nerves seem to or-
iginate from this part.
This seems there centre of
origin. If we cut across
below this point & all
life below is cut off.
Innervation is destroyed.
But if you slice up the
brain above, the nerves will
not lose their connection of ac-
tion, i.e. from below.
But as the function of the
nerves seems to be somewhat
specific. From this centre
there seems to be something

radiating - we conclude that
the nervous system is not only
a seat of sensation. The quan-
tity of radiating matter grows
to diff. parts is diff. The
parts hence are more sen-
sible than others. It is now
sending in me it influence to
the parts of speaking while to
others, and it is doing it more
or less. What is this matter -
is it the simply nervous mat-
ter. It cannot it is wider
reaches & like a cord trans-
mits its influence. How is it
effected? We dont know - but
we are forcibly led to say
it must be something - we
cannot divest our minds of
this opinion. My finger
receives a sensation - this is
communicated to the brain. it

must be something that is
transmitted - be it electricity
or galvanism - be it the
ether of Nord it have any
dif: flow wh it is kept
to, than among animal
animal bodies - be it is
galvanism there must be
something to modify - and I
cannot see how a dif-
of pressure and drain
but this fluid & wh
it is demand life &
answer is never used
for filling the nerves
this fluid. But what
is it that take it misans
of those temperaments - I
wh will wh a vis radiat
it to all parts - we may
in one admit nerves infl.
be owing to galvanism

There must be something a two-
fold more added. So in call-
ing it generation, we do not
at all. We call it consciou-
ness. I refer it to intellectual
yet many of these sensa-
tions. felt without cons-
ciousness. Therefore they cant-
wholly be referred to that
principle we call soul. No
thinking faculty. Were this so
case not one, especially if the
way food of healthy which
have the lowest pain.

This principle cannot be
cognisance of itself. Therefore
we must ever remain ignorant
of it. I prefer to use the word
nervous influence. This merely
expresses a fact without at-
tempting to explain its origin.
This ramifies throughout the
system, to the blood. This we

arterial influence or sympathetic.
Now these two influences are absolutely
necessary to the excitability of all
the tissues. If the heart be destroyed
the acts of life disappear.
I would make a fourth division
on the terms irritability, excitability,
contractility &c. but we are
now speaking of function in a
perfect heart. To use the
term irritability in reference
to a healthy function does
seem to be absurd. This
term must properly be called
a morbidity. To apply the
irritability of a normal to a
function seems very improper.
I will now use the term
excitability here. When an
organ is capable of being
acted on by any stimulus
excitable. Irritation I
would only refer to a

morbid action. I also be-
lieve in contrariety. Whatever
the Effect we may conceive to
take place without cont:
or elongation, we should want
terms to express correctly
varying functions or impressions
I state therefore clearly
that the term excitability is
preferred to any other.

When you have and re-
cept: of the two or unequal
distribution Nerve will
necessarily divided we
find more blood in one
organ or tissue. This is
also applicable to ner-
vous system - other
tissues are largely sup-
plied by nerves, the more
sparingly - the author
believes contrary the doctr: it
be needed themselves are
the means by which he nerves

we conveyed to a point.
The nerves enveloping themselves
around the & follow it
the Anat: like the lips
the cannot determine
this in many points. But
the physiologist wonder
so urgently. When we
come to the capillary ves-
sels the nerves & vessels be-
come of uniformly blend
that we cant separate
the one from the other.

In these parts where
art blood is most nu-
merous, there the nerves are
also. This is another
evidence that the two
systems in performance the
action of life. In bone
we find but few nerves
& blood vessels. There is
necessary for here was

influency.

I think it apt: the
Soul: in Man & looking
at it with sympathizing eyes
can easily make some
allowances. It is under
from what has been said
that the animal & func-
tions are dependent on
those two influences of
the Ganglia & Mendulla Obl:
in Dif: organs & tissues. But
whether the nervous syst: &
the brain is also-inf: we
cannot say. But it comes
to mind from the varied & Ganglia.

Every organ
or tissue has its own part,
magnificent & functions &
availability. We consid: the
fluent: cause in our per-
sons & fluents & if the brain
was to be used physi: cause

Quits. In this way we will obtain the most surprising common knowledge. The amount of residuality is of immense importance to the physician. Both in the Materia Medica & practice &c. & in Toxicology. without this knowledge we could never be certain of our results.

Some parts of the body are more liable to take on the phenomena of sensation than others. In some parts impressions may be made & we don't take cognizance. Children made over the surface of the body with the hand & then directed to localize feelings. When other impressions are made with a needle the man frequently is pained &

some organs when application of cold kind is made over the whole sensorium. This takes place in the point of pungent, sharp pointed instruments, & bringing them in pain is very great. This seems to have been so nice; it is generally, or we believe, that we do avoid something.

The part of organs in man act first: now not only the largest organs of blood & nervous, but also have the greatest amount of activity. If you cut off the supply of air by excluding the lungs. Many animals will seems to have few nerves, but we have cut off & all new implements off. They are never capable of

excitability. From this fact we might be led to conclude that it does not depend on the blood or nerves. If we suppose an independent infl: one independent of nerves & blood &c. The excitability of a body is necessary to its moving on of the blood. It is a peculiar action of this simple excitability. We must conclude therefore when it is great excitability there must be a great supply of blood & nerves. Both you bring an exciting agent to an organ you excite the regular cycle of the nervous infl:. You damage the excitement of the organ & it is in your act wasp. Infl: emerging.

you taking drinking the excitin-
It would seem that it is by
stimulation that a cond: of
an organ calls for more an
increased: of nervous influ: to
blood. For excite repeated
the alcohol in blood is
reduced to natural
then to an increase of nervous
influ: — But if you keep
pouring out off the nerves of
digestion you will have
no increased flow of
blood to that place. The
will thus now to nervous
influ exhausts the state of
excitement.

The ear must seen the
the nerves & art: are body
nec: to an increase of
excitement — we have
seen that dif: parts of
the body have dif: degree

of excit:. we are also
left to infer that if the
part is most excited it
excitement will be de-
manded in two parts.
We that language has
more force & dis: is
not: more the cond:
of any man if he orgas.
to be made of in
to is not compat:
So that force we in
the long made. Just
the is a kind of inward
Obstac. & perform a
function; but it is not
the of a health act:
the acts in accordance
with stron machine in
the parts of the body.
Some are those are

hemorrhage that this and
was prevalent when the
amount of fluid is the
greatest. Then the circ. of
blood is great in new
life is greatest. Then the
machine is most liable
to get out of order. This
same law is applicable
to all complicated machines.
Then this city
was supplied by a much
more complicated and
powerful and improved
pump. Now we have
known Ladies please forgive
me if they were prejudiced
if you will not know
the parts most likely to
take on this. Open good
books on physiology

of these you will find
there are some much wrong
in the functions & organs.

We have been talking
much about vital functions
& actions. & we use them
but often use terms too
indefinitely. Of these functions
we cannot always tell the
consequences of ~~the functions~~.
They are beyond our reach.

It seems which other
can be seen before us
this morning: we will begin
second with the medium of
the blood. The blood is
formed out of the nutritive
fluids &c. It has become
so thoroughly in a uniform
state. The blood from

a great quantity of our bodies
for part: acc: of the blood
I refer you to prof: of Anat:
&c. They will of course refer
to it. The blood has 3 approx:
elements - a watery part &
a coagulable part - & red
globules. The blood & animals
is made up of all the elements
It is remarkably homogeneous
& has a tendency to keep
itself in a uniform condition
It is made up from the food
& drink in from without. This
too must have been part
of organised being each regular
to animals. Water &c are
the aliment of vegetables - but
to support animal bodies
organised substances is necessary -
The aliment is first taken
in mouth & be swallowed
& taken into the stomach
in the lower intestines

a fluid from which it takes it. It passes into bowels. The nutritive particles are then absorbed & passes into venous system. The blood passes from the right side into the lungs & then into the left side of the heart. It is always necessary for it to pass thro' the lungs to be fitted for nutrition.

Of the warm animals which live on animal food & those which live on vegetable we find not much diff. in the blood. This the diff. from food & fluid taken in. It is the part of animal to decompose & form new bodies out of these substances taken in. A change is made in the compound. This is what exactly occurs, in bacilliferous & similar all of which are necessary to tonic of blood.

the blood now but change
&c. When we look more in
the deep we find &c. How
the blood circ: thro' the whole
body. The blood body circ
over your head north mon
has a reservoir map.
Show wh it is carried to ce
tants for what is it? It
is for some th: to connect the
body his animal economy =
A continued series of decomposi:
cond: takes place. The parts
have previously existed in the
blood. There is the albumen
of blood. We find many of the
parts composed of this albu:
& we have have many sub:
stitutes of Sclerotic, this is not
more than modification of
albumen. The elements of
the various tissues of the body
are to be found in the blood.
What takes place in body is
not: more than an exchange
of the blood a little altered

in its form. The consti: reproduction.

We have secretions, as the mucous is mostly a stomach secretion - the pancreatic juice secretion cannot work at animal economy without beholding secretion. In all the emuncto: of the body we find fluids thrown out. These all have a relation similar to N of nutrition to the blood. The secretion will can throw out from the serous mem: is better than the serum of the blood. In urea we find formed to engrossing nitrogen, hydrogen will are found to exist in the fabric of the blood. They are all secretion - some of them may be called excretion as the bile, & the pancreatic will be seen to synonimal & serous mem: - These are not excrementitious.

The point: we have

Essential machinery those of the body. The act: of food upon mat:- compel it cont to undergo new changes & wh are ext: in various directions so that the animal functions presents to us comp: & decomposition of mat:.

We have the functions of relations - we say we see - then we have a sensation of a specific kind - the sense of sight. This is not: more than to we have a mode of existence of wh we are conscious. For we observe that a small portion of the body is appropriated to these functions. But since it is our function of nutrition to keep in op: this division. If the optic nerve is unable to transmit the impres: this must be some effect to the

nature functions in the part-
Now let us see the things about
this kingdom — some wise
ones as it is now wanted
of lose in the capillary vessels.
But here another will tell
you there is no cont. in
these vessels. It seems to
me that the mere circ. of
the blood thro the vessels are
not suff. to nutrition &c. They
are more but tubes &c. I
cannot conceive of any further
the cont. of these tubes. Un-
equal distrib. may indeed
place it unequally &c. but
we know the rise is a part
of consciousness life. But
if you call up a hundred
to perform an addition
part then is an unequal
distribution of the blood.
If you take a drink
into the mouth & masti-

cate it. There is an afflux of
blood to that part. You
have an increased secretion.
When alimentary are taken into
the stomach. Now it must
happen to the heart, & then
the will depend on increased
funct:. This is a concurrence
of nat: fluid & act. the
funct:. A fluid amount of
blood is sent out in a pre
liminary, & the nervous energy is
is also thrown out. This is
necessary for the standard to
act on the food. When we
have what is called an excite-
ment we have an increase
of nervous influence to the
part & also of arterial
blood. When the end for
which it was designed to funct,
again returns to its fore
standard of action. When
this has taken place in

in one organ it takes place in another.

Now we will at a future time come to make an application of all that I have said. We cannot. You will find that we can not have disease without disorder digestion & assimilation. Dis! comes out to be not an improper distribution of their fluids.

When one organ is disordered in funct. other organs may be affected in various modes.

The animal machine is wonderfully complicated & all these are brought in to a mortal play by a disorder of one of this parts. Hence you will see how complicated the phenomena of disease will be. But we as we image by the phenom:

of disease? or rather more than its symptoms - The organs continued to act but they are not used as are in accordance with the funct: of other organs - Hence you will see these must vary in diff: parts of the body.

Dr Rush defined dis: to be morbid action. This is not exactly right yet it is not all together wrong - Dis: has not that unarried act: of unity.

How did this morbid funct: have rise from the organ on which the morbid action was made? This is the question wh has long agitated the med: world. This is a question little understood by the profession.

I call your att: to the blood. because the blood is obvious & palpable to us - It is nec: to the blood that exis: the animal machine. It is supposed under cond:

cordi: a larger amount of
blood is required to a part
as in the muscles in preform-
ing locomotion &c. But still
it is necessary that the circ: of blood
shd be uniform & uninterrupted.
In a chill the blood is thro
from the external cutaneous
surface upon the internal
viscera. This is wh takes
place wh cold or moist-
ture is applied to cutaneous
surf: Then there is a manifest
of unequal distribution of
blood. Then dis: is com-
to internal parts by ex-
ternal causes. I doubt
sup: if any change in the
blood itself or any change
in the excitability of the
system. It is only in from

ing off the the blood from the
external parts to accumulate in
the internal organs. Hence the
nascent morbid act. commence.

Let us now consid: the
change wh takes place in
the blood itself. It is the law
of our economy that the blood
shd be kept in a uniform
condition. If an organ rec-
eive blood of a certain qualit:
diff: from that of its healthy
act: dis: will arise it is
evident in the organ. That
the blood is freq: change is
unquestionable. Sup: an
unnatural food is used for
a long time as is oft the
case on ship board, the nu-
trition particles of the blood
will not be that designed
for healthy action. Hence

you will have distinct
up from this cause. The
first obj: of the blood is
nutritive operation & se=
cretion & exhalation. se=
cretion takes place from
the Kidneys - exhal: from
the lungs & skin. If any
of these functions is impeded
~~or obstructed~~ dont take
place from the Kidneys -
The excrementitious mat:
wh they were designed to
be thrown off by urine be
retained & this urine mix=
ing with the blood & be=
comes a poison to the
whole system. Often is
the product of ~~Disease~~
a local cause with
depending in ~~constitution~~ fatty:

The skin performs an excretory
funct:- The mat: thus thrown
off is excrementitious. If this
excrement is retained & the skin
does not perform its funct:- it
is taken along with the blood
& air: is then brought to the
lungs & may be said to
disappear to the pulmonary
exhalation. From retention
of bile- it is absorbed into the
blood & becomes as we may say
a poison to the funct: of life.
The blood loses its mat: ar:
heat- the urine becomes a
tinge of yellow.

The funct: of skin &
kidneys are amore
or vicarious. This may be
exist: as the obj: to which
have been done. There are
numerous outlets & they are

ormet. perform act: for
the another. When the kid:
neys are extirpated the fat:
ty & though the particles of
the urine is carried off
thro' the other secretory —
During cold wh the cuta:
neous exhal: is small & the
flow of urine great. This
does not arise from a vica:
rious but from a large
amount of blood being
thrown on the internal
organs & hence the elimi:
nation of urine is greater
than usual —

The condi: we have come
to — are 1st wh the blood is
deflected from one part to
another. dis: is induced — or
not from the vitiation of

nutrition from unwholesome al;
the blood becomes vitiated &
dis: is brought on. 3d. that
when the excreting organ is
defective in its functions. the excre-
mentitious mat: not thus or-
gans that have been thrown off
& is retained in the blood gives
rise to morbid action.

Dis: may arise from
an acc: of blood in the
urinary canals. as in the
dura cava. you will see
some instances in which
an infl: exists in a part,
but: on hand infl: about
the head & coolness only
will precipitate a fatal con-
municat. dis: by the pass-
ing to nervous influence
but by the increased amount
of blood sent to the part
- ing from the
amount of blood plus

in condition canal. This may
differ itself to the case just
spoken of yesterday. I
spoke of the great excre-
matory organs as the
kidneys &c. This I observed
if one cases the cause of dis-
There are cases analogous
to this — As when the
internal surface of the
vein becomes inflamed.
& pus is thrown out. The
pus is then carried into
the air: & produces general
dis:— This is not from
the shock to nervous
system occasion, but from
nothing more than a
foreign sub: in the blood
& air: with the blood &
reaches the heart — into
the brain & in this way
frequently proves fatal —

You see this is a case somewhat analogous to tobacco I pointed out yesterday.

The appearance of the blood when drawn from a person dep: under dis:. The cupped, the buffy coat & you all know is indicative of infl: action. I have seen this app: of the blood induced in a few hours by sinapisms. An infl: of the eye would also give rise to it. This app: arises from some decomp: that takes place in the blood. All goes to show that the infl: has worked out an exp of dissolved fibrin in the mass of blood. This is a mat: of importance for if the fibrin of the blood

organism can produce. No
how much ought it to
demand our attention.
Who can pretend to say
that this ever! Thro' need
hypothesis is not the cause
of the general dis.t. On
this I think we have a
great deal to learn.
Acting on an all the
functions it must undoubtedly
excite a morbid action.
The blood you are aware
tends to the preservation
of all the organs. it
seems to regulate the
functions to maintain
the vitality of all
parts. On it are all
these dependent. More
of pressure may be spent
to this than to a person
unknown. Let my cor-

it would of inquiring wh
ope modes of morbid act.
& are not brought on by
this state of the blood. May
not most general & worst
dis: be owing to this state
of the blood. We shall
have cont: occasion to
refer to this opinion
in the course of our lec
tures. Contemplate these
& either make the yourselves
or entering subject they
& think & shall do this
hereafter. (L. N. 14.)

We shall next consider
the sympathetic action of the
nervous system. This is
called sympathy. There is
a bond of union between all
parts which we call vascular,
& cellular, & ner
vous. The various parts
of the body are associated
by nerv: connection.

When there are distinct organs. They seem like distinct sovereign states — we have the parts in the mount all concurring to the same result. Now let there is an understanding of actions in the parts we are aware there is an association of action & receiving this understanding. This too may be said of the eye. The iris is filled with oil. Shades of light — the eye adapts itself to various distances. How do we digestion — function? In like the duodenum, & act sympathetically? Or more in this the nervous system. You will see that the nervous function is

various organs & orders them to act in concert. The nervous system! The establishes the system! of associated action. Many parts are associated in mastication, deglutition, respiration, speech &c. In resp: the muscles of the heart & lungs besides those of muscles. This goes on whether thought it or not. All these parts are only controlled by nerves. You may travel and see where spontaneity stops.

Now what is thought? It is nothing more and nothing less, &c of this associated action. Nothing more than morbid nervous influence. Now this proves action in resp: &c we cannot tell.

We only know that the
brain descend act as
influence. I can hence see
why we have this. This
is a violation of this infe-
rence law of association
You will perceive the
diz: between the this: other
of the organ from that
in another arising from
nervous influence.

But here we must
guard against too much
generalization. It would
now be nat: deduct: to
infer: all dis: of this: in a
similar organ may be de-
fined by sympathy. Again
this I must be guarded you
have will consid: the effect
to this. Show the brain, the
centre of mind perception —
& all kind actions. This new

centre near the medulla oblongata. Now if this part be injured all the parts will be disturbed in function. The brain is not disturbed. The muscles are unclasped. This is not effected sympathy. It shows you that there is a force in that central point which is sent out wh forces or calls into action all these parts. A lesion in this part produces instantaneous death. This is not a case of sympathy. It is from external nerves coming to this centre of act: wh directs the force wh is radiated from this centre upon all parts. When this part is disturbed life entirely ceases. If the heart is injured down out life is im: [illegible] diately. This is not caused

by sympathy. A tumor may arise & press on a nerve. This will give rise to dis: below. The parts are dis'd: in fact this is not sympath: it is nothing more than a cutting of the nerv: infl:. There are many cases of this kind. Sympathy can only exist where there is a nervous influence. We may reflect lesions to any extent or indefinitely without affecting the patient. In the parts which have no circulation of fluids, because there is an additional quantity of nutriment sent to the parts.

Sympathetic phenomena arise from blows & wounds in external surf: Pen:

zic acid affects the system
sympathetically. I have al-
ready referred to how cans
which are not the effects
of sympathy. This is a law
I wish you to recollect. This
is a thing distinct from
what we term of mathes
There are parts of the
body more readily called
into sympathy, the parts
of the animal economy.
But these details we
cant go into at present.
I have shown what this
is for proposed to the sys-
tem man cap: to be affect: but
preventing us from being
affected. There is another
mind to wh I would
direct your attention. This
is a subject on wh we
cant go into deti:

bimal cons. No funct.
is susceptible of maint: its of
It is dependent on some oth
ers. If it be insulated
this funct: immediately
ceases. It is a law of animal
economy that the different
stomach be supp: by blood
from the heart. If this be
cut off they no longer
perform their funct. It
is nec: to their existence
therefore that the heart
shd exist to maint: the
funct. Consequently wh
there is a failure of the
act: of heart this must
be a failure in the part
Sup: there is an excessive
growth of heart consti
tuting hypertrophy. It is exerted.

The nervous system will act
imp. by the act: of heart.
Our view bears on an in-
flam: action from dim-
a given amount of blood
from the increased act: of
the hypertrophied heart. The
is a dependence of funct.
shown that disease in this
way is induced.

We find the heart can
be moved by sympath:
If an irrit: is excited in
a limb - or the mucous
membr: be stimulated by
alcoholic drinks - the
heart will beat on
an excited act: & will
throw out with greater
energy the blood to the
diff: organs & in this

Dis: will be excited in these distant parts. Hence the heart is sympathetically affected being into morbid action in distant parts. awakening in them inflam: This last is not a direct sympt: action. It is only a secondary effect. There are two principles you observed in this sympathetic action concerned. If you admin: opiates - use Vs: do you may weaken the inordinate act: If he heart you allay the irritation in the distant parts.

All the dis: tions have his tonic: use he heart by being sup: ed

too much or too little
blood. If the heart be=
coming languid in act: we have
a congested state of the system.
an oppressed debilitated state.
This as you have obs: is
taken on from the cardiac
effect.

There is a strength in=
stand of this when we re=
fer to the brain. In speaking
of the brain I have no
direct reference to the
medulla oblongata. Let
us consider this for a moment.
If you slit open the cap=
sule of the heart the
animal mist: falls to
the ground. This boundary
from the blood not
marking the extremity=
because this portion taken

when a tourniquet is ap-
to a limb. This effect
arises from the want of
blood to circulate the
centre of nerves. You will
have fainting if the
quantity of blood be
small due to his part
there will be a want of
action. On the other
hand if the quantity
be too large the will be
lassitude - disordered funct-
ns. This is a kind of
Hydraulic effect.

Wh the heart is pinched
in an animal - tres-
more is his breathing -
This organ expands and
approaches. it is more
frequent than of the

parts not the head. The
muse as you are all
aware because the brain
is no longer able to funct
out the nervous infl:
There is a complex machi-
nery of nervous power.
The funct: of the brain
are distinguished from wand:
by its nat: stimuli. Ment.
Locomotion from to want a
of this nervous infl: cand
to be effect. If there be
a great irritant in the
brain from any cause
& all the parts are colli
fmt. morbid action. No
is a universal sympa.
This cant be called
sympathy but it is
a morbid influence com
municated to the

Musely from a relaxed
state of the nervous in-
fluence from an excessive
degree of excitement. With
respect to heating causes
the cold and the heat, it
is nec: that both should
act in a certain way upon
the other. If the impr:
will is shewn by one on the
other be considered as
a certain quantity in
their lives is equal.
The one will commence
morbid funct: in this
therefore the difference
of the effects may be
the consequence. Thus:
of marriages Rounds will
arise upon constitu-
tional appearance Disease

All this is the dependence of one function on another. We see another example in the respiratory function & the circulatory. Suppose there is an obstr. to the passage of the blood thro' the lungs. There will be a damming up of the blood in the right side of the heart. Anxious venous dark blood will be accumulated in the abdom. viscera & the liver &c. There will be a suppression of the secret. of bile. You see all these this is not a single action. It is the dependence of the action of one organ upon another.

From these effects you may have effusions from the pericardium &c. There will be fullness of the ascending cava - the face will be flushed & compressed of the brain - producing apoplexy wh will often be found to depend on this of the heart.

I suppose there is disease of the lungs &c & the blood is not properly aerated from this about the flow of blood from not being decarbonized & again back heart to the heart wh would prevent this process all the body is brought into morbid action from mere access of an unhealthy

Idiopathic is the first affection resulting from a remote cause. This is an original or primary affection. All other affections of organs arising from this are sympathetic or secondary.

Much dispute has arisen about the existence of idiopathic fever, some deny fevers to depend upon local inflammation always being symptomatic.

Most affections are consequences one upon another. Dis: takes place & this originally dis: in the stomach. General prostration & dis: may take place in dis: bowels until the whole system is thrown into dis: & then the will be as it were an explosion throughout the system.

Every dis: state is the cause of an effect, necessary dis: relief in many ways. Sometimes we have a complete, & has first affection getting well while the

Symptomatic affections may go on
to destroy the life of the patient
Endocarditis in most cases of
fever does not take place
tho' the secondary affections
from which have been the
use of the terms of Idiopathic
& Symptomatic are not of
much importance. Suppose
a child take strama. The
first impression is made on the
stomach. This impression is
conveyed to the brain. The
effect becomes apparent. Impression
first on the 3d 4th & 5th pair
of nerves. The impression on
the brain is done but does
not seem impeding the
muscles & convulsions ensue.
The action of the heart
is increased in action. An
increased quantity of blood
is sent to the brain. Paral-
ysis is brought on of one
side. Lesion has taken

place in the brain is his immediate cause of death. Then you see how remote the first effect is from the last, the cause of death.

You have much about general & local diseases. General dis: cond: dis: of the vascular, nervous, &c systems. This is constitutional disease. A dis: is called local at confined to a limited part. For there may be dis: which is universal. It is general when confined to those general systems, w[illegible] I have mentioned.

Hunter first adv: his doct: that no dis: can exist in the economy at the same time. This doctrine is always correct. Two dis: processes may be acted on at the same time by two dis: causes

exciting dis: in each. But it would seem the two causes acting on the same organ, would not excite the kind of morbid action. Hence you see Hunter's law respecting one organ or tissue is correct enough. This is true of the vascular, or sympathetic nervous tissues.

When nervous and we can a local dis: is existing in a part it is difficult to get up a new disease by another dis: old and the primary will subside. Two great nervous causes, as the pleura in the system at the same time. Locomotion, muscular operations & digestion cannot be easily accomplished at the same time. Foco-

motion is performed with difficulty during the process of digestion.

But the mind is not satisfied with the fact. It would enquire into the cause. The cause about which I have been speaking has not been fully explained in the treatise on physiology. One of our most valuable therapeutic principles is involved in this law. If when one organ is diseased you can excite dis: in another part less important and to the point of lip. This cannot always be effected & indeed not without danger at all times. Your uncle modern just the patient in point of activity. Good

being turned in action of his
heart & the system generally.
Then your management to
ground decisive effort.
Treat like or in med.
seems to me to be very
attached into my friendly &
wd we have been speaking.

It is nec: to attach
some definite idea to
the terms strength, debility
power, action &c. If a
man is capable of exerting
great muscular action
he is said to exert great
strength. Strength con-
sidered when applied to
organs is it capability
of action. Great strength
by stomach implies
great digestive powers.
Great strength of the heart
implies his power to

and the blood will force
a lodgement in all parts
of his body. Weakness is
the delirium incapacity to
perform different functions
A person muscular and sound
& yet his digestive functions
powerful as perhaps it has
during convalescence.

I wish to direct your
attention to the temperament.
I wish you to study the
influence of the disease.
There are three - the sanguine
the conduct in a
free development of
the organs vessels - & a
fullness of blood - Pleasing
by his kind and mild to
acute disease. There have
dispositions from which old
well - The temperament of
this is the phlegmatic -

The action of the heart is
increased. it readily forms &
the nervous system is easi-
ly excited. The heart is
unable to drive out the
blood this is unlike that
the nervous temper:- Must
we have the bilious-temper:
The act: of the heart is
altered here in the phlegmat:
they are exposed to the
same dis: as both the last
temperaments. It is apt
to terminate in the melan-
cholic habit. The
treatment required
in these dif: temper: is
diffic- and lecacy deple-
tion bleeding &c. Dr Currie has writ-
ten the most philosophic
work on this subject.

I will now con-

Many about the vis medicatrix naturæ & the conservatrix. You perceive it is a power that has built up our bodies. Thus constitutes what we call the living phenomena. The heart contracts from the stimulus of blood & this action is capable of continued action. Variations from this action arise from unnatural stimuli. Remove this exciting stimuli & the heart comes to act acc: to its accustomed habit. The conservative power of a lake is to keep itself within the bounds of its mountains. To keep its surface smooth. If storms arise & ruffle its surface. it can & will soon recover its quietude. is this owing to it conservative power? No & stronger says the Cartesian

Definitory &c.

Nervous irritation is one wh you have been ready to hear. & we shall write it frequently. Still it is dif: to understand its meaning. The term irritation is not math: it indicates a mode of existence. There no dif: of understanding. By ner: cond: we mean a mode of existence dift: from its healthy mode of action existence. Thus when we desc: this distinct: from healthy action. we see the remote fruits of this action. of its primary source we know nothing about it. we know no more about it than how it takes place the contact of two subst: &c. If there be pain we say there is ner: irrid:. If there be coldness of feet we say this is a defective action in the parts arising from ner: cond:.

we say the same thing wh the part is hot & painful. In some states there will be accumulations of blood & pain state be from its nervous irritation. By nervous irritation we mean a defective or an increased nervous influence. With either defects & increased cir: in the part. When there is an accumulation of blood in a part without pain & we do we call it? — plethora or congestion. With there is a defective nerv: act: in part with acc: of fluid we call it congestion. You will perceive that this congestion is a secondary effect & depends on something to be influenced by the nervous system. With a part is congested you will consider it the cause of the vital change in a part. It may

continue for a time & again disappear, & the heart regain its healthy action. Yet the phenomena may come & go. Then the pain, throbbing, pain, exaltation of sensibility &c. You say my heart is inflam. You now drop or modify the terms nervous & congestion. It might be called a state of high irritation. inflam: congestion. nervous irritation inflam:. This may be brought on by a reaction of the parts. Perhaps the very acc: of blood in the heart may be a sign of the existability of the heart that inflam: &c is det. up. Nutrition, the excessive action &c will in a state of hurry. Look place in the heart are now prevented.

Just as the morbid activity of
organs do not you be called
in lunatics - these you easily
distinguish from your healthy
or normal functions -
As the same in the part you
discover other alternations just
in place - as extravasations
&c. which you battle to be
evidences which is said from a
human action - You have
pus &c. After having found
that it is a vision incision
the part determining to be healthy
function: - If you will pus &c.
alternations &c. But as a
river which after having overflowed its banks, after returning to a channel tho' changed in its windings still
serves as for the flow of its
waters -

J. Janie Dr. Eccles -

Suppose in organs may make
heart ~~in organs~~ from other
lives. The advantage of the
heavy parts of organs may
be so gradual as not to
be observed. Finally, they
tend to disease. This has
been called organized disease
by any cause has is a morbid
nutrition in the part. Good
will also not be increased
action. In flow of blood &c.
in a part & these we
now speak. But to define
the meaning of the terms is
absolutely necessary before
we set out to treat of
particular diseases.

We will again speak
of the act. The blood
which goes to the diseases is
intended to supply the organs &c

to supply a secretion at
a certain place in this organ.
This takes place in every
organ or all blood is removed.
Anatomy has not pointed
out how blood going to
a part - or part of it
should be sent to organ
& another to supply its
secretions. They can't dis-
cover the vessels wh
perform these functions.
Knowing an organ
secrete an increased supply
of blood, its secretions are
increased. The same
change certain place if the
kidney - the testes had
normal. The nerves
implanted in the part is
either too great or too
small in the organ. Most
frequently imaging in this and

consequence of morbid secretion in the part. If the part has become vitiated in its function by implem. action it will be our aim to subdue this infl. action. & we will call upon attention to <u>Spasm</u>. This is a cont. but rapidly place in muscular fibre of a part. It is a law of muscular fibre to relax & contract. It is the law of the heart to cont. & pass. rest. Now as long as the muscl. fibre cont. to act in a man. in accordance to its accustomed funct. the part is in a healthy condition. But when the cont. takes place

morbidly & in some cases contracts to the extent of he wild we call it spasm. In some instances persistent spasms take place permanently in the arms. This we call Tonic Spasm. There are nervous diseases connected with spasmodic action. This we say is one of nervous debility. A man has a local cause giving rise to his general disease.

To be a physician in the actual acceptation of the word it becomes us to consider further the morbid actions of the animal machine

You will readily perceive that we should labour under difficulty were we to go on to consider particular diseases before we are completely acquainted with

some general principles. On this subject I would wish you to think, even as dull & cloudy as the day is. One of the best modes of studying a subject is to be obliged to make others understand it. He, who undertakes to teach will always himself be the greatest learner. Make this subject a matter of thought for yourselves. This is a matter yet sub judice.

This subject includes a classification of the Materia Medica. One person may use one medicine of a particular class & another a different of the same class each being governed in his prescription by the same principle & each will obtain the same result. It is this generalization of medicines &

disease to which I direct your attention.

It is true all diseases presently in their origin & progress with a peculiar kind of morbid organism called inflammatory action — To relieve this organism we must use means to subvert this inflammatory action — We must first endeavour to moderate it — You will then perceive with me the reality that exists in what I have said. You will understand the utility of considering the means that are in our reach — No matter where this inflammatory organism exists whether throughout the system or only in a particular part.

This subject, however does not admit of a severe classi=

fication. I believe subjects are often made obscure by an attempt in the commencement at a nice classification. It is always necessary for us to take a bird's eye view before we can attempt to methodize upon a subject. This I have all along avoided.

We will now consider the means used for reducing this inflammatory organism. That which we meet with in most cases of inflammatory fever.

In the first, I place all active life & its functions depend on certain stimuli. They are these, light, caloric, food, the atmospheric air which surrounds us & constantly acts upon us. It is on these & a variety of others

which keeps up & in play this active principle we call life. When any one of these or all together act inordinately disease in some one of our organs will be developed. When you find disease set up in the body, don't stop to enquire how it was got up. Then the first thing to which you will direct your attention, is the enquiry of what keeps up this active life. Look to the light, the sound food & drink &c. You must diminish the action of the heart. Restrain exercise. You must submit your patients to a deprivation of all these natural stimuli. If you would wish to reduce inflammatory organs, let it be situated where ever it may.

The second mode of reduction is by

Abstraction - This is effected by taking something from the blood - The deficiency of which would keep up this forced organism - In the first instance something is withheld in the latter something is to be taken away - Abstraction is effected by bloodletting - You may take it either out of the veins, arteries, or capillaries When the heart is within our reach we can effect this object by topical bloodletting by means of leeches, cups &c, provided there be not much general accidement when the inflammatory organism is general - The brain engorged & when it is radiating its in-

fluence on the system. like the lightening now dancing from cloud to cloud & then darting upon the earth with deadly fury.

Bloodletting is not the only mode of abstraction. You must abstract the caloric from the body. I now speak of cold applications. I now speak of withdrawing the caloric, not depriving the body of it. Another is to remove from the tegumentary surface every thing which can irritate it, as clothing, bandages &c. The mucous surface is of more importance to be considered than the tegumentary surface.

I speak of removing the irritating matters which may be lying in the intestinal canal & stomach. This if left to remain, may be the cause of keeping up the inflammatory organism throughout the system. The recrementitious matters which the natural functions have deposited there, must always be removed. This when the system is in a healthy state never excites diseased action, but when it is labouring under any affection it becomes an additional irritant.

The next mode of subduing this inflammatory organism is by Eliuents — that is pouring upon the mouth or skin, water either cold or warm

& mingling it with some mucilaginous matter. You may think this a very inefficient means, but as you go out to practice for yourselves you will observe diluents to be of the greatest utility. The absorption of mixed fluids into the blood is of immense importance. This will produce the effect which I am proposing by being admitted into the blood & thereby diminishing the inflammation.

The next are the refrigerants. They are vegetable acids. The nitrated salts, as nitrate of potash in dilute solution & acids taken largely into the body will tend to diminish the heat of the body. No matter what you may hear respecting these

substances acting as irritants on the external surfaces so exciting inflammation - all such ideas I cast to the winds - I know well by observation & experience you may in this way refrigerate the system & lower the inflammatory excitement - He who merely looks at the effects of the remedies on the eye or the tongue, or the external skin &c may delight you by his theoretical reasoning - by his <u>a priori</u> deductions but rather, much rather let us take observation & experience for our guides & we will find these articles of great & astonishing importance -

You will observe that the

consideration of these means now will be of service to us when we come to treat of particular diseases, as pleurisy &c. It will relieve us from running into minute details. Thus if there be inflammation of the brain, the abstractions will be imperiously called for. In inflam: of the pleura refrigerants will be indicated &c.

Well I know some of you are thinking that I have neglected or forgotten the most material part of our means. These are secretionists. They are those which augment the secretion in various parts & organs. You will observe as you increase secretion or exhalation you lessen the excitement or spasm. For example if you

promote the secretion of the urine
&c, if you do not give water
&c you diminish so much
the sanguineous mass - By
secernants are meant cathar-
tics, diaphoretics - scalapogues,
diuretic &c - They are depla-
tories - They are abstractants -
but their action is complicated
while they are bringing about
a depletory effect they are
producing others - You may
excite the intestinal canal
by cathartics, to throw out
an increased quantity of secre-
tion - but in doing this they will
bring on an excitement throughout
the system. This is an irritation
& not an effect of abstrac-

tion to lower the diseased excitement - They augment the excitement before they allay the increased morbid excitement - Now it will be necessary for you to use your depletory means first - Some suppose by lowering the excitement by abstracting blood diseased action may be arrested. but this can seldom be effected - To effect this you must increase the secretions from the secreting organs -

Now when you excite an organ to increased secretion you are restoring which before was not in existence. Now secondary sympathy is only a morbid association - If you can restore to any one organ to its healthy action it will it will then

carry its healthy influence into all the organs affected. This is one of the happy effects of decarnanty. This is a kind of derivative action. This communicate its effects from organ to organ all over the system.

I attach great importance to this subject. Though I am compelled to hasten through with it, but I wish you to think on this subject for yourselves.

We come now to treat of that class of remedies, namely so called.

[illegible]

The anatomical & physiological view of the digestive organs.

In every case of dis: it is indispensable to consider the anat. & physiological knowledge of the part affected. It is necessary to have an idea of how the dis: & healthy condit: of an organ morbidly affect. Let us now turn our att: to the anat: & phys: of digestion:

organs. In all animals there is a sack called the stomach & an intestinal canal & with these there is associated the glandular organs which are necessary to the process of digestion & when they are in a morbid state the digestive functions are disordered. Then we have the masticatory organs - lined by a mucous membrane & these supplied with nerves possessed of a specific sensibility as the 2d branch of the 5th pair of nerves. Next we have deglutition. The muscles concerned in this process are various & complicated. The glossopharyngeal nerves supply these parts. The next is transition. The oesophagus is concerned principally in this - supplied

the aorta: artery, which terminates in vena azygos. These are branches of this organ. I shall principally confine the purpose. The next process wh takes place is Digestion. Digest: only partly takes place in the stomach. The food undergoes some changes in this organ - called the seat of digest. This organ has a specific sensibility - wh excites the desire for food - wh is principally situated about the cardiac orifice. This nerve is the par vagum. Supplied with blood by the coronary arteries. The food is lodged in the cardiac orifice. If any part as it is conveyed into the pylorus it is deposited in the pyloric portion & hence transmitted into the duodenum. This power

of transformation exists in the hepatic plexus & this part of the stomach is supplied by a different arteryNow from is the superfluous water past out? I believe it is absorbed by the veins & hence conveyed immediately into the blood. It is this act conveys the peculiar smell of asparagus into the urine almost immediately after it is taken. Were this water suffered to remain in the stomach the gastric liquor would be too much diluted. Digestion likely placed on the outlet of the substance in the stomach it is melted down like a mouthful in the sun. This is an example of the consideration found in the digestion.

The pylorus expands & admits the chyme to pass thro to the duod. It is then formed into chyle by the action of the bile & the pancreatic juice. After the secretory ~~ducts~~ passes from the duodenum it will be excited & this excites the liver & pancreas. These parts are supp. with nerves from the hepatic & celiac plexus. This is called duodenal digestion. Now comes to the ileum & small intestines. In these the chyle is completed & its nutritive particles are absorbed. The parts are supp. from the mesenteric plexus & with blood by the mesenteric arteries. Lymph and chyle brought to the great intestine. Here the process of fecalization

after peace - And the re-
commendations matter is
lodged in them - It is re-
tained here for some pur-
pose - The accumulations
here act as excitants - we
keep up active life - Rest
we come to be <u>recruited</u>. The
have besides a dep: of the
ganglionic nerves are dep:
by nerves from the spinal
column - And we have
nerves of animal of sensi-
bility - in the other portion
they are principally organs
of organic life possessing
little or no sensibility - Most
sensibility old be more
obvious it is necess: to excite
the individual to the exer-
cise of faculties &c -

These parts never performs their functions without being in a certain state. There is nervous & sanguineous exciting into them. This is effected by the stimulus lying on the mucous surface. If food is long denied these organs he is excited then a desire. When the article is at length brought to it there is a disposition to an excited organization. The brain & heart are excited. There is high excitement in mind, body while it is diminished in other parts. For the purpose of transforming the food this is necessary. The brain & heart are kept stimulated & the memory

gastric juice is thrown out.
It is necessary to prevent in
many instances to stimulate
the stomach by food to
keep up an excite in the
act of digestion — It is an
mistaken notion in mod-
ern pathology to suppose
digestion can be improved
by abstinence — The same
excited organism is now ex-
cited in the lower portion
of the intestines — In hy-
pepsia, in the illness — I
think it takes place in the
beginning to excite to the
discharge of his fecal
matter —

No organ is so particularly
affected as the stomach —
Its relations with the organs in

ruinous — Its dependent organs are the liver, the pancreas, the duodenum. You will have read a deal the epigastric centre — this includes the liver, spleen, duodenum, pancreas. These are conn. by a community of secreting media by this sty and connected together. These I have named, and the associated organs of the stomach. Continuous sympathy of stomach here often takes place. They are also connected by a nervous mechanism with the epigastric of which the spleen. These are connected in another way. They are all supplied by the coeliac artery. They are all supplied with blood from this artery — it branches into a no. of branches. You see how intimately these parts are conn. together. But they are conn. together by many

of the nervous system. They are principally supplied by the great sympathetic & the pneumogastric nerves. There is a plexus around the coeliac artery which seems particularly to establish an under-standing between these organs. Hence you see how easily these organs may be sympathetically affected. With respect to adjoining viscera when disease is excited in one organ it is communicated by the gangliac nerves in its immediate vicinity to other organs.

You will find which the cardiac portion is supplied by the descending branches - the pylorics extremity receives nerves from the coeliac plexus. also arising from the descending branches. Hence it is the liver knows when the chyme is passing from one portion of

the stomach to the other. The liver is associated with the other organs I have named. I refer now to the peculiar circulation denominated the portal. The blood concerned in this collected from all the abdominal viscera with the exception of the liver to wh it is sent. The gall bladder sends its blood into this portion of the circulation. According to my recollection the blood of the liver is sent thro' the hepatic veins to the vena cava. but not of the gall bladder does not. all the blood from these viscera unite in a short trunk called the vena portae. This receives the veins, wh ramify thro' the liver. Now you have in the liver the ramification of the hepatic

ality, the veins & of the venous
system. Hence you have
three kinds of blood in
the liver.

Now you will obs: that
the smaller intest: the liver &c
are connect: by the venous
trunk. Besides there is the
peculiar connect: &c. so
much for the immediate
con: of these parts.

We now will consider the
remote con: of the stomach.
Look at them with con:
mastication, deglutition. &c
This connect: is by the pneu-
mogastric. The pharynx, larynx
&c. and the instrumentality
of the brain, connect: deglut:
with the stomach. The nerves
give life to the organs and
they supply. ~~[illegible]~~
hard it seems there is

efficacy in cases in laryngeal
& pharyngeal affections
in dis: of stomach we find
in oesophagus aff: exciting
cough &c. By means of the
8th pair of nerves wh go
in part to supply the lungs
&c. Now when the stomach
is aff:- the morbid excite
may be conveyed up by means
of the nerves & give rise
to dyspnoea. Hence we can
readily see as there &c con:
nection with indigestion.
And this may take place
in a contrary manner. We
may have an excited
com: to the brain & find sen
sation by his eyes or ex
cant amusements &c. We
have the cardiac plexus of
the ~~sympathetic~~ sympathetic nerves wh

forms a con: with the head & stomach & we again have them connected by means of the sympathetic nerves. Hence you see the heart is easily excited in affection of the stomach. & then the amount of blood will be more abundant in the stomach. This also takes place when the process of digestion is going on. The amount of blood sent out is greatly increased.

It is seems to be a law of the animal economy that when you excite an organ in one way you will raise an excitement in what is called the sympathetic system of the nerves supplying this organ. Apply this to the stomach

enough — The brain you
write about will be excel-
lent nervous & sanguin-
eous organisms for the just
the two the consequence
of the other. The brain is
dominated in disease &
the quantity of blood sent
to the head than usual.
It is this that gives rise to
that comes well comes on
after taking a hearty
meal, as when you come
home after dinner —

The stomach is ag.
associated with the kidneys
& the pelvis by his sand
clues of nerves — The great
by mesenteric. Then the
stomach may excite an
influence upon these or-

fans. But the stomach has branches from the intercostals & pneumogastric: the stomach & abdom: viscera & the skin you know is deeply with most intercostal nerves. Hence you see how air of the stomach, are easily excited in the skin & vice versa.

There is not of greater value to man than the body he now are engaged in. Yesterday we found the stomach was bound by the nervous system with all parts of the body & is intimately connected with the abdom: viscera. The brain & heart & sometimes cast the principle organs & the stomach & secondary organs. They are not gen: formed especially the brain, but it is the commander in chief of all the other organs. Like an

army wh has been raised up by recruiting officers. These are but subordinate as the other organs to the brain, & when the army is compleated there is appointed a general. Hence the brain tho' the last organ built up in the animal economy, yet is paramount & upon it only the command of the whole. The action of the brain & heart is nec: to the preservation of all our organs. The eye receives the stimulus of light. This is by means of the brain & the whole system may be excited. The same may be said of the act: of the acoustic nerves on the ear. The skin is a susceptible in the other to be acted upon by heat. Yet a multitude of things may not event any infl: on our bodies. The lungs have a susceptibility to the act: of various agents. The skin is act: affected for misfortune. Nitrous oxide produces and ef:

In all these cases the excitability is partial.

Now you would conclude *a priori*, that there must be some general centre of excitability. You will be led to the conclusion that all animal life is a state of excitement. Every part of the body is subject to the excitement of external agents. The nervous system is endowed as to the susceptibility of many agents. Hence arises the great dignity & power of the stomach. This gives it a station in the animal economy next to the heart & the head, only second in importance and pleasure.

The stomach has not the same sensibility to every external agent. I think that it can be affected by light. Odours appear to act on it as most effecting the sensibilities

membrane. Of all the parts of the body the stomach is acted on by the greatest no. of agents. It is on the nervous system of life most influenced. It is the last to be the subj. wh. destroy life. Many events in influence. Yet connected with this is the act. of cert. agents incid. to life. It is a wise dispensation in some of the ways that be so restricted. The eye only to light, the ear to sound. But the chemic action the stomach is excited by many agents. Man endowed with the power of living in every climate & country — in every situation — but maintaining life, finds on the surface of the earth, wh. excites in him the action of life. Yet there are many agents in life which are

not capable of certain mental
actions. You will observe
that the subs. wd are necessary to
the maintenance of life are
often combined or associated
with the noxious substances.
Indeed noxious & innocuous subs.
under certain circs seem to
be nearly the same things. The
human system may be poisoned
by flesh & again cured
by arsenic & antimony —
Our object is to study facts —
& not largely speculate.

Some persons look upon
stomach as excited by various
agents but it is necessary
in cases of being thrown into
a state of dis — that we
must make it the study
of our lives if we wld have
all the organs in a state
of health — that we must
avoid hasting many subs.
into the stomach. This
is carrying into this food

Jas. The God of Nature has not created things in the way. Every organ he has fitted to its natural stimuli. It is the law of the animal economy that every organ as the stomach should be stimulated. The appetite wh excites us to take these stimuli into the stomach proves the contrary of the views of these modern hydrologists. Is the young man wh has never travelled beyond the precincts of his city — whose muscles have not been exercised by exercise — more or less ~~able~~ ~~to~~ ~~the~~ bear fatigue than he who has been reared in the country & long habituated to exercise?

The stomach is the organ of digestion — & the of assimilation or accompanying keeping in action the heart & brain & preparing nutriment to for alcoses

Dyspepsia or Indigestion.

We come now to consider some of the morbid states of the stomach. Dyspepsia implicated in many diseases cannot consider it necessary here to detail it, but it is called the most important in the proper & original function of stomach. To this morbid state, we direct at present our attention. If an improper action is exerted in the stomach the function is destroyed or impaired. The action of the heart is weaken. This we should not call indigestion, and dyspepsia. On this subject think for yourselves. & bear in from many ways digestion may be temporarily disordered & you will see how many disease will be excluded from what is termed dyspepsia. This seems to be nothing more than an impaired state of the digestive functions arising

from some organic dis:- These
reasons have made the term
Dyspepsia perplexing to the
Student of Medicine - If you
like him if it is not an
infl: &c? he will desire to
know the approximate cause -
while we recognise the influence
of gastro-enteritis - dis: liver &c
we must consider Dyspepsia
as a dis: distinct from either
of these. I think post mortem
examination could present
us with no lesion in any
organ. This I think constitutes
Dyspepsia. It is an idiopathic
affection - It is a disease wh
sigs as on the mind: fevers
of life - Rout ap: in childhood
generally ap: after puberty -
& continues until the 33 or
36 year. A dis: wh endures
about 10 years wh I mean
to say. It means individ:
- especially in city & those engd

in the highest walks of life are from the 16 to the 36 year exposed to the most horrid symptoms - & if at any time the stomach alone be examined it will exhibit no traces of organic lesion.

Now is it nec: for me to enum: the symptoms - Might I not refer you to your own experience. But as you may not all have experienced this malady I will relate some of the symptoms wh char: this idiopathic malady. It is truly a paroxysmal dis - This violent raging & abating I am led to think arises without any cause either from indigestible food or any thing else. This is a something (I cannot call it a fact) wh when you believe

complains of being miserable, if you talk to him he has been transposing a line before. He will not trust you for he knows he has not. The paroxysms have come on frequently since during 15 years let the patient do as he wishes. I infer that this is not a dis: excited de novo. but being purely dispeptic.

Symptoms. Heart burn or coursing. a feeling of cold in the stomach. sometimes a feeling of acidity. a sense of distention. a desire for something stimulant. a feeling as if the stomach contained a hard body, as marbles. oppressing & weighing it down. a ravenous

appetite - It is a mistaken idea to say a loss of appetite is a symptom of dyspepsia - There is sometimes nausea & even vomiting but this seldom occurs. There is flatulency - This arises from the food not being properly digested throwing out gases &c. Chyme & chyle is formed in many instances but is of unhealthy kind - This may give rise to the symptoms I have mentioned - There is costiveness of the bowels sometimes light coloured & again dark coloured stools - Sometimes diarrhoea &c - All this is indication of a deranged state of the liver. This deranged state of the liver & digest-

to be a consequent or & connected with the dis:- There is occasionally great distention of abdomen. This often rapidly proceeds offensive D. ouj: from and enlarged state of the prostate gland:- Generally tenderness of epigastrium. Urine often affected. Skin dry. hands & feet cold. Perspiration usual diminished. Skin shrunken - face pale - eyes sunken - cheek bones protruding - &c. The mouth a sound taste. This I cannot explain unless it be from a sympathy of this organ with the stomach. The mouth is apt to be dry - often thirst. The heart is affected - pulse langid

comparatively empty - frequent & flattering often - Often not more frequent than natural - Seldom or never indicate febrile or inflammatory action. The expression of the eye is dull. Spasmodic rotitandes - A twitching of the eye lids. In the muscles general lassitude - Irritability of purpose & relinquishment - & in some temper: Hypochondriasis - When these symptoms, or some portion recur, at times a maximum & passes off the individual has had a paroxysm. If the dis: is connected with dis: of liver, indigestion with the other imperfect -

If the dis: is not symto=
matic. after the pain ceases
there is a great buoyancy of
both bodily & mental func=
tions. he feels as if he
had escaped from a thous=
and evil chances. he feels as
Gulliver felt when he es=
caped from the Lilliputians.
The dis: is general neu=
ralgia, & the bilious temp=
era most liable to it.
It is said to be the mal=
ady of men of genius. Hum=
in our applications in this
dis: there is some consider=
ation to chew us.

<u>Causes</u>. To enumerate to in=
dicate to you even what has
been said to give rise to this
malady would take up too
much of your time. Many
causes produce. Many causes

disorder the digestion. There is a cause in the United States which exerts a great influence in producing the dys- 1st Luxurious & stimulating articles of diet & drink - gastric repletion & stimulation. The latter is one of the remote cause of Dyspepsia. Not that every person who lives well becomes dyspeptic but the dis: is oft incident to such persons. Stimulating diet & drink being an influence to arouse throughout the system & may give rise to inflam: or atony of mucous inflam: of stomach. But as a rule systemic inflammation doesn't actually constitute indigestion. But we may have an inflam: dyspepsia but this is not

more than chronic gastritis-
did this alone constit. indiges-
tion why do we at ale use
the term dyspeptics - I dont
think it to view the matt.
in this light is of any import=
ance - It is difficult to distinguish
from inflam: - If we
admit dysp: to consist in dif=
ferent degrees of irr: or inflam:
we will frequent be at a loss -
I believe dyspeptics may
exist & does without inflam:
yet it may occur with this
state. The cause I have
mentioned in dyspeptic affec=
may give rise to inflam:
action - I wish you to con=
sider whether these are two
distinct maladies? Many
diseases may be connected
by an inflam: action yet we
dont show these to be
dependent on inflam: - Of
this kind is Hysteria - of in

The Dr. H: is necessary.

2d. Articles of diet & drink which are not stimulant but wh are indigestable. wh lie in the stomach wh produced chemical changes &c. One of these is short cakes or hot biscuit. These are differently acted on by the gastric juices. I have known men wh called themselves half horse half alligator fellow wh said they could not digest these.

3d. The use of stimulating drinks as tea, coffee, ardent spirits. I am convinced that tea is one of the causes of dyspepsia. It exalts the nerves energy. it influences actions, is both the moral & physical man. It increases

the mental & corporeal functions. It dont degrade the man, but refines his feelings. It enlivens conversation & increases man's fitness for the social state. Tobacco & tea is less stimulating but the stimulation of wh I speak is attended with a decrease of this exalted state & will leave the person in an vitiated state. This dont depend on the circulation. It is an influencing of all the organs & functions. I believe that the use of these beverages in students &c & in females are readily carried to excess. In the Leuphilopnalic temperament it is not so injurious in its effects. Coffee is less so than tea.

Spirituous drinks so fre=
quently produces inflam:
of the stomach, but this
is not always its effect.
This is evident from the
difficulty with wh intem=
perate habits bear blood=
letting. Yet most certain=
ly this is one of the most
powerful producers of that
inflam: & yet wh invari=
ably to the kind of dyspepsia

4th cause is tobacco.
In Hamilton & have been
told by a person that a
drunkard cannot get along
without smoking. The
Netherlands & Germans are
around the country is very
low & damp & that wh
this is the situation the
people are generally dear=

cophagmalitis - By such persons tobacco may be used with impunity. I have heard it said of a company of Dutch soldiers who had to light their pipes before he made the charge & made it with the pipes in their mouths. The injurious effects of tobacco: Good arise from its increasing the flow of saliva. This is not the issue wh sup: the digestive function. The true modus operandi is the nervous irritation induced in the system wh gives rise to its injurious effects & increases the digestive functions. The habit of smoking in young men I think gives rise to the malady I have been speaking -

In the 5th place sedentary habits. Exercise is necessary to all our functions. Running is said to be the best way of taking exercise. The abdomen is agitated. The diaphragm is actually excited.

Atmospheric vicissitudes. The atmosphere is cold & damp is apt to produce a fit of dyspepsia. The functions of the skin is affected by it & the bowels the nerves the stomach & the intestinal organs are affected.

Why Malaria I can't tell you this. but we presume there is something thrown out from the earth during summer & autumn. In hot climates where malaria is most abundant

& fevers are frequent dys-
pepsia is very common. I
have seen persons who were
very affected with this malad-
ady, recover from it when
removing to situations wh
were exempt from miasm
fevers.

Dys. - Great muscular
& mental exertions. When
the muscular sys. is act., usu-
ally the blood is withdrawn
to them from the internal
organs. The nervous energy
is increased in the muscular
system, while it is diminished
in the stomach &c.
Loss of sleep & the usual
diet &c. Hence you see
a peculiar kind of exer-
cise is always necessary in
treating this patient wh. so
has arisen from want of it

9th. The passions — as fear & anxiety. Such affections seem to affect the stomach & in a dyspeptic habit will bring on a paroxysm of dyspepsia — & in many instances will produce it —

10th. Intense application of the mind — It seems to divert the nervous influence from the stomach — This is connected generally with sedentary habits — There is in such persons a deficient, erratic action of the bowels — as in the first, blood will may travel up to the stomach & affect it —

In civilized lifes we find all the causes combined — I have called this a disease peculiar to cul=

civilized society. It is here
we meet with gin, rum, brandy, wines &c. The
finest & most refined
delicacies. The noblest ef-
forts of the mind are thus
here found.

In our last lecture we came
to the con: that this dis: is
closely connected with the ner-
vous system & that those in-
troversions are made in the
stomach. Not that the
stomach is always primari-
ly acted upon. it may be
secondarily affected.

Now when you examine
a paroxysm of this malady
you will find various parts
affected. various symptoms
will be developed during the
paroxysm. wh disappear with
it. Sometimes it has: the

organ remote from the stom: from a nat: debility or dis: - may thus make it liable to disordered functi: during the paroxysm. The functi: of assimilation of the stomach will be transmitted to the origin organ & it will be violently excited - & when the organ is repeatedly acted on in this way, permanent disease may thus be sympathetically developed. Dyspepsia in itself is not a mortal dis: - but it may be involved other organs so as to be the primary but not the ultimate cause of death.

When we have dyspepsia a well balanced constitution one unimpaired

the stomach of being dis=
troyed by it as when it happens
in persons with weak or=
gans &c.

I will enumerate the
dis: growing out of this
malady. We come now
to the application of the
manner of the propagation
of disease, formerly treated
of by me. I will now
apply those principles.

Let us look to the
lower bowels. The pancreas,
liver, spleen &c. Now you
can understand how the
stom: can affect the bow=
els & liver. first by being
lined by a similar mem=
brane. it is bound together
just as the skin is cont:=
ior in the stomach is

In this way comes to the bowels - & constipation is brought on which will remain after the stomach has recovered its healthy action. In the same manner the liver becomes torpid in action - It may recover from this state when the primary cause is removed but often it will turn into tubercles. If the stomach suffers from gastritis the liver may suffer from inflam: - may suppurate - may become indurated. During this state we may sometimes be led to think we have from the first mistaken our diagnostic symptoms

I have intimated that the urinary organs is affected in dyspeptic dis:- It may be increased into quantity - calculus deposits may take place - medicables may be brought on from disordered diestion - This secondary affect: often demands our most attention - There are primary affect: wh demand our attention - When your patient has dyspep: you ought always direct your att: to these organs &c.

In the upper portion of the alimentary system you have the oesophagus, pharynx & mouth - These parts are found in the oesophagus - Stricture is here

bowels met with — This
disease is in some cases
liable to dyspepsia.
But with respect to the
pharynx it is often se-
riously affected in this dis-
ease an inflam. will be deve-
loped here. There will
be a dyspn. There will
be an organic enlarge-
ment of the tonsils, some-
times terminating in ul-
ceration. In the mouth
we have various appe-
appearing. The teeth is
often found to decay rapi-
idly from this malady.
I have known a person
lose 19 teeth in one year
who had during that time
been afflicted with
dyspepsia. The 2 branches of

of the pain of nervous
affection — This arises from
the action of the gastric acid
acting on the parts of the
mouth. We have also ul-
cers in the mouth & the
tongue — These ulcers are
usually found surrounded
by forests — The healthy
membranes being the pos-
ses — The nitrate of silver
best appl: to such ulcers —

You are also aware of
the dis: chronic, dyspep-
tic consumption — The
dis: developed in the lungs
an infam: called chronic
bronchitis — we have bur-
ning — & tuberculous phthisis
giving rise to hectic fevers —
Dyspepsia may awaken
some one of these disorders

I have known serious
cont. affected with cough
immediately relieved when
the primary aff. was
removed. In dyspepsia
dis. you will always
examine the chest. its
extent. the mammary
breast and &c.

The maladies of the
heart innumerous.
They are functional & organic
etc. In most fits the
is heat, palpitation.
may exist for a long
time in the heart. Pains
often arise from sympathy
with the stomach. look for
hypertrophy of his organs
of digestion &c. of the salivary
An organic dis: may be

developed from sympathetic action. as from dyspepsia with disordered digestion.

The eye sympathizes with the stomach. Such cases result from dyspeptic disturbances. it may occur in one or both. The conjunctiva of assumes a chronic inflam: from impaired digestion. about the orbit of the eye. there is an acute pain above the eye. & often over the whole head. this is termed sick headache. This is essentially the dis: of dyspeptics. The patient has disturbed dreams. & wakes up & dont know whether he was asleep or not. he awakes in the morning. The pain

4 severe - cant get up - in the evening takes a cup of tea - afterwards feels well previously he had vomited. Often it comes on in the morning - vomiting of an acid mat: relieves him he goes to bed - in the morning awakes & feels well - This is purely a neuralgic dis:- a derivative malady of the disordered digestion -

We come now to dis: of the brain brought on by dyspepsia. A hemiplegic epilepsy - Hypochondriacal Hysterics &c. I have seen epileptics come on in fits of great intellectual function - I have seen hemiplegia of an inveterate

Cotton Kind rising from his bed - This comes on in lessons of nervous temper. There will be a numbness of the one side - it doesn't amount to complete hemiplegia - but in respect to sensation - in what the person will talk to you but will take you for an other person - he doesn't mind you are in the room you are - he will tell you you are not the physician he sent for - he will tell you he knows a thing or two - I recollect a case in which a young man fell into his state of <u>Lunacy</u> connected with epilepsy - he had been in a naval engagement -

the second on board. he
thought the poison around
were the sailors. the cap-
tain of the vessel had
been killed. Whitman again
& made some pathetic and
characteristic remarks. The
vessel had been taken. This
he conceived. & held out
his hand to some one of
us as if giving up his sword.
He said he was fatigued
& desired to be left on
the deck & wrapped
in his coloney. he asked
one of the sailors to give
him a drink. a minister
& had made the now
book, tho' during his ser-
vice he had sickness
refused it. he returned
to his correct lines of

about 20 minutes afterwards

We have seen that the liver is nervously bound with the stomach - Hence when there is irr: in the stomach you will find irr: in the liver. Now if you have a morbid action in the stomach - when the stomach absorbs alcoholic drinks do you will find irr: & be taken into the liver to exert a morbid action there - Hence you see that in the first, reason alcohol excites the stomach & this is sympathetically with liver - then again the liver is directly excited by the alcoholic fluid -

The liver I don't only consider an organ merely of secretion but also of elimination &c.

Both are subject to the continuity which is brought by the sympathetic action then by the fact: of secretion being imperfect & then again thro' the intervention of the liver. not throwing out a secretion of bile &c.

The kidneys & stomach are bound together by ties of nerves. If the nerves will go to the stomach: and vice versa those will go to the kidneys, vice also &c. In a state of dyspepsia the chyme will not be

heart, & also the chyle. The
kidneys are eliminating
organs - hence what is re=
tained in the blood is here
thrown out - are fried
acids in the stomach, now
the kidneys will secrete an
acid - If there be a great
modification of acids in
the stomach you will find
it in the urinary in cir:
& it will be thrown out
by the exhaling & eliminat=
ing organs - - & with
respect to the lungs the
stom: & the lungs are con:
by nerves. The connect: ing
link is the brain by means of
the pneumogastric nerves.
The circul: may arise in
the body & be reflected off &

The lungs are eliminating organs. The smell of garlic, liquor, &c can be detected in the lungs & look therefore to the lungs as organs of excretion as the kidneys are. Say that the stomach is in an unhealthy cond: the urine be tainted also, & bad — the skin will be unhealthy. This will be invited into the right side of the heart & thence to the lungs giving rise in this way to disease.

With respect to the heart this & some remarks are applicable. It is easy: with nerves from

the same branches, as the
stomach - It seems more
~~glossopharyngeal~~ nerves than the
cerebral nerves. Hence
if there be a disturbed
state of the nerves of the
stomach, we will nervous
disease in the heart - it will
act abnormally. If
the lungs from receiving
unhealthy breath, does it
in this state with the
heart will be to it an
unhealthy stimulus &c. The
same will happen if the
quantity of blood from
stalling &c will from any
or hypertrophy &c of this or-
gan.

With respect to the
brain if you excite the

External injury of a
nerve will will convey an
irr: to the brain - Comp.
Lidus his pain as pain to
the stom: - if you have
an morbid irr: in the
sentient extremities here
this will be transmitted
to the brain, giving rise
to epileptic, neurosis, hy=
pochondriasis - hemiplegia
in. Organic lesion
will here sympathetically be
developed too, & this bind
last after the primary
organ has returned to
a healthy action.

Treatment. We use only tools
to reason, will respect every
thing & have before reason -
& shall not dive at in

my part of my course to prac-
tical medical or compounds.
I shall only speak of certain
indications to be fulfilled
& certain classes of med: for
more minuteness in this re-
spect to the chair of Mat: Med:
& Pharm.

For works on digestion I
refer you to Philips on
Indigestion - Paris on Diet, &
Johnston on the Stomach. &
also Abercrombie's papers on
constitutional diseases aris-
ing from local affections &c.

In reference to the stomach
& its morbid malady, I am
inclined to consider it connec-
ting a morbid action of the
nervous system. Then may
be superadded to this an in-
flammatory action constitu-
ting gastritis. Hence I dis-
card the consid: of stages in
this affection - It is approached
with a torpid state of the bowels &c

What are the means within our reach for restoring it to a healthy action. It will be to recollect the etiology of this disease. Recollect the causes that give rise to it. One reflection of the causes will lead us to consider the exciting causes to demand them to effect a restoration. This you may sometimes find very difficult. He may deny the use of tobacco as a cause. you will seem a discontinuance of it - in this you may frequently be deceived.

The causes arising from improper diet generally lay the head. You must enquire to regulate the diet of the patient. You will have to direct your patient let it raise from the cause

it may. Your object will
be to keep the stomach, just
as you would a fractured or
fractured limb, at rest as
much so as possible - that
it may recover its lost en-
ergies. You must not call
upon the stomach to perform
a function while irritated,
which while in health it
performed perfectly & easily.

When fecal matter
accumulates in the lower
bowels it will produce dis-
ease in the stomach - but
still in your dietetic ap-
plications you must not
choose such articles as will
be entirely formed into
chyle & leave the colon not
at all loaded - Much ac-
cumulation must take
place here - it is necessary that

Then what be a peristaltic action kept up in those bowels — it is nec: to keep up this stimulus wh goes to keep up the vital fund. If to remove accumulations by purgatives you will be disappointed in your effort. I believe there is a limit imposed upon us in reason: a diet to aid dyspeptic patients. but if there be a gastritis you may withhold to almost any extent stimulating foods. Then I dont allude to that state of the stomach.

1st. The diet appropriate disease is quantity wh has been taken in unnecessarily quantity — The reduction of diet

depends on the temperament
when the signs of inflam:
are not great the redne:
need not be dreaded. But
when you find the tongue
red — tenderness of epigas:
trium — pain in stomach — &c
but when the symptoms
were off — you will slightly
increase the diet.

2d When any part: act:
of diet or drink has been
the cause it must be
entirely omitted. You
must distinct this in
his but let him use &c

3d Those things wh
are difficult of digestion
must be proscribed —
These you will often
most readily learn from
the patient himself

4th. The food should be well masticated. By this it becomes mixed with the salivary juices & that the surface to be presented to the coats of the stomach will be greatly lessened. It should be for a long & slow process. I have known many cases of dyspepsia much improved by these precautions & not diminished.

5th. The diet should be both animal & vegetable. This seems to be a law of our nature, & our diet should be mixed, consisting of both animal & vegetable. Many observations I have conferred to correctness of this remark

when the stomach is inflam-
the farinaceous diet will
be proper. When there is a-
cidity the animal food will
be the best.

6th The animal food
should be cooked with sim-
plicity. Meat without
condiments. And com-
diments as sausages, pickles
must be proscribed.

7th Meat meals are
improper. The lean parts
of animals, that are very
fat, is the most digesti-
ble. When the animal has
been very poor the fibrine
will almost be reduced
to its elements.

8th Salted dried &
smoked meats, especially
those wh are fat must be
eaten sparing.

9th. The delicacies animal
real, & venison boiled with
wine & are indigestible.

10th Fresh oysters are
digestible.

11th Salted animal food
is more difficult than soups.

13th Animal food should
not be cooked very much
by cooking a great deal
in nutritious particles is re-
moved.

12th eggs not too much
coagulated, nor fried in
butter, or fat, may be
eaten in small quantities.
I don't think soft boil
eggs good diet for dyspeptic

14th Milk is good
but it does oppress the
bowels. Men are

man patients with whom this dont agree. it will often coagulate in the stomach. It is not easily acted upon by the stomach. It is mild & unirritating. When the patient is afflicted with diarrhoea it should be boiled & mixed with lime water &c. Now more digestible.

15th Of vegetable food potatoes is better than wheat bread. It must be fermented not too. baked hard & eaten stale. No bitter ale: under these restrictions Wheat bread. Dont violate any of these restrictions. if you do your pat. will suffer for it. To make it agreeable the bran has been left in it. The bran is indigestible. it irritates the bowels. but if the

Stomach is irritable it will
distress me greatly.

16th. Indian corn bread
without shortening - or egg
& made into a thin pan-
& kept to same & then not
baked too hard - it is
then a good article of
diet - it is nourishing
& acts gently on the bowels
It must be eaten when warm
Meal is not so digestible
as the bread baked from
the same kind of grains -
It generates acidity -

19th. Water cracks are
good - & may be eaten with
out being toasted - they
then are soft & do not be
come hardened - When eaten
hard they become weed
mixed with saliva.

18th Farinaceous articles potatoes - lima beans - rice do contain a great deal of feculae. They are applicable wh gastritis is present. The sweet potatoes has a something that makes it inapplicable in dyspeptic patients. They act on the bowels & in this way they are useful.

19th Dr Smith potatoes shd not be mashed up.

19th asparagus, tomatoes do are good.

20th vegetables liable to lactic acid fermentation are improper. Hence the acid

terminal & dynamic facts
are laid. When they
do not give rise to acidity
they are antiphlogistic.
They will often increase
the acidity of the stomach.
Of Lactic at all other times
Laudan on an empty stomach.
In infl: cases useful. In
advanced they are on the
bowels & pain off constipation
are the only bad effects.
Many of them had been
be laxatives with the opium or
the other &c.

2/d. All disorders which
are improper, as well as
hitherto must be avoid. im-
proper. especially cut
they have been long

220. Tea & coffee are to be taken moderately - water when there is a predisp. to dis. in any organ is the best drink - On the other hand wh. the pat. is not very young - a little spirit added to the water improves it. Fermented liquids, a bottle, port, cider & domestic wines are improper. Old wine & good bottled cider you will often find of service wh. taken in the morning before breakfast.

You obs. that I recommend a state of the stomach in wh. it will be necessary to reduce the diet to a minimum. Yet there are many constitutions

practice will not do. There are cases in wh the farinaceous art. wont do - in wh animal food must be resorted - Avoid all articles wh will tend to a supraabundantion of the bile. This is a dis. opt of many years in these cases a mixt diet will be the most proper. Yet here the must be simple the fat: must be taken in in moderate quantities - so as not to cause a feeling of distention - we are more apt to err in allowing too much dis the fat: which tends to lead him into excess in his meat: - Yet this

we must be cautious not to run into the extremes. Injury has been done in this way. The powers of the stomach may be weakened by pursuing this practice, & it must have its natural stimuli. it suffers without it. in idiopathic dyspepsia we must not deprive the stomach its natural stimuli. The law of the animal economy is that the stomach & bowels shd be stimulated. There is reason in all things & nowhere is it more obvious than here. avoid extremes.

Medical treatment. [illegible] of this subject that will be of substantial value to you. What we can

accomplished by medicines
often be but trifling. But
as I understand it is necessary
you should make some
estimate of the value of
what is said respecting
the treatment of this
malady in the book.
I cant present to you
what are said to be indi-
cations of cure in
this dis: — I shall
to call your att: to the
classes of remedies which
may be beneficial.

1st Of bloodletting both
general & local. When
the patient feels heavy
sleepy after eating — feel
flushed — pulse excited —
thirst — tongue red — full
hard & tense arteries & the

epigastrium - your man
[illegible] Pm is a gastritis
& Ms. da will be indi=
cated - This Ms. dont
will bear blood letting - &
cant in reality be cured
by blood letting - But this
you may resort to it if
hard, it cant be wrong &
in a sanguine tem. cases
Many cases with brother
Ms. will admit of cupping
&c. In all cases where
there is plethoric habit
you will find relief
apoplectic - an admirable
remedy - reaches in the
constipation & make them
cant often be left -
or acquire a Rice to
manage them - But

cupping is accessible to all & everywhere. Instead of a scarificator you may use a simple lancet. & think local bloodletting of great advantage in many cases. You will distinguish the cases to wh. I allude. you will learn what are the symptoms of a chlorotic plethora. This class you will easily distinguish ~~from~~ from what I term idiopathic hydrocephalus."

"You will recollect that more cases in wh. you will be led to see in case in wh. you will be prompted to give animal food. You will find the medicaments already in pill form to emetics

they are almost prescribed
in this disease. The Heart
& blood entirely throughout
out of the question. In
those states of the system
in wh. it is required
they should never be used
but in the other form
& below the tranquilizer
the excite the muscular
act. of the stomach. its
secretions are improved.
The whole system excite &
a variety of symptoms are
relieved. But this is
a state wh. is still confin-
ed to stomach. This state is
a nervous irritation & it
wh. are freely induced.
Emetics in these excite
tism example & symp
may even death. Now

When you do administer
emetics to such habits
should be regulated. Given
in the mixt Laudanum

Cathartics - They are
divided into purgative
laxatives. - Now it
seldom happens that
cathartics are applicable, yet case may
happen - As when
a patient of Leucophlegmatic habit comes to you
one who is a gormandizer
& has great discomfitment of digestion. you
will seldom bleed him -
you may give this
med: or mild emetics -
It must be individual

You may pour with great
advantage both cold
water on the liver & so
called Diaphragm. From
these he will experience
great relief. Yet there
will be a limit to this
use. When you find
them having produced
your injection or all they
can do, discontinue them.
But cases in nervous
depression are contraindi=
cated. & also in those
cases in which there are
accumulations & tumors
in progress.

Laxatives are more
generally. You use it
simply to prevent ac=
cumulation in the

bowels — but a true dis-
ease of the bowel school
will tell you that it
there is symptoms of
inflam in mucous mem.
Yet I think whenever
the dis. is attended with
costiveness laxatives should
be given —

Much has been said
of <u>injections</u>. These are
formerly commonly in
use, with the lower bo
There is costiveness &
a phlogistic action pres.
are beneficial — but
in habitual habits
they will derive more
advantage from cath.
&c. They have do in-
jury

Anti-acids. You are aware that acidity is a common attendant on this dis: but I am strongly under the impression is derived from the stomach. This will often be known upon by emetics or spontaneous vomiting. When persons are subject to it you may set it down that the person's stomach is sec: acid. If he vomits he is relieved. If you then give him magnes: or lime water a salt in the stomach this acid passes into the bowels & will produce purging

& he will cry in his
may be relieved. If you
for his cart: Colour &
he will be immediately
relieved. If you see
they are admirable
relatives but then a
nothing more. They
dont be more decay

In Dyspepsia we
are incessed with nervous
irritation, flushes
Apnia, restlessness.
Spasmodic action. Now
here you are to admit
fear in a-a-a-b. Narcotics
is. Always shows Rad
but you find may lay
open with your fact
Here are opium. Asafoe

hyoscyamus, cicuta, fin=
ore acid. These you may
combine with your rem=
edies.

Tones. All the above
drugs that tones are
almost specifics. Be=
cause there is no hilsty=
non all drugs in ne=
plasm: condil: they are
contraindicated. In
inflammatory dangers
they are no hope. In
weakness: indirect:
when other remedies fa=
=iled. Avoid giving those
which are as injurious.
Combine them with
something that will be
a laxative. They often
will harmonize

Diaphoretics. Non are
well aware of the con=
nection the stomach & other
& lungs &c. When we wish
to restore act: of
the stomach, we must
attend to the skin &
use such means &c. — When
you find the skin dry
you may apprehend
inflam: in stomach — but
when it is cold &c. it
will denote debility —
Do not use warm bath
flannel rub the skin
friction &c.

Moral treatment.
When there is a contin=
ual gloom hanging
around the patient &
a want of resolution

when he is dying he
must expect to live long-
& neglect his worldly
affairs. You & his guro
will endeavour to ex=
cite some pleasing ima=
tions in his mind - some
gladdening hope - some
gay image. You will
descend from the brain
an excitement which will
extend over all his or=
gans - his clitoral will
be excited to a remark=
able - he will feel him=
self a new man. he
will again form new
plans of business & his
friends will say he has
had the skin & he is awake

Man &c &c. But it is
upon just cause to think otherwise. They dont understand his dis. Know
no & will unless upon
only for the Man & the
credit of himself.

Cholera Morbus. Diarrhea
Dysentery. Choli Infantum.

You may think it unjust that I mention under
one head so many diseases
In the book you will find
each of these described separately & the symptoms appearing dis. But I will
present the to you as they
have presented themselves to
me in practice & to my
understanding as dis.
of a deep organic nature

n alady.

The viscera concerned in
these dis: are the stomach
the bowels, the liver & called
the diaphragmatic organs —
from when there is increased
& inverted, peristaltic mo:
tion, & the slimy mucosy cau:
se. we call it chol. When
confined to an increase of
the peristaltic act. we call it
Diarrhea. When confined
to the lower bowels & bloody
discharges are present
we call it Dysentery.

Pathology. 1st. let us consid:
the peristaltic function. A
morbid state of this when it
is inverted or increased mor:
bidy. In chol: it is inverted.
In this dis: the contents of
the stomach is expelled &
even the cont: of duodenum &
even occasionally of the ileum

It the same then is an increase of the peri: act: of the lower bowels - Now this sometimes exists alone, then it is diarrhea - Hence you see the connect: of these two dis: - This peri: is connect: with dis: - we have morbid contraction of muscular coat producing pain - & in the lower bowels constant & augmented - causing tenesmus - This constitutes dysentery

2ly Let us inquire into the cond: of the mucous memb: I spoke of this af: of the peristaltic act: first because it is always most obvious & chol: we have morbid inside of the memb: & mucous of the stomach - The mov: of the stomach &

bowels affected. In Diarr. we have morbid sensibility & morbid increased secretion of the bowels. This constitutes the immediate cause of diarr.: In dysentery we have the mu: membr: morbidly sensibile. with more pain & an increased secretion with blood & serum. This is confined mostly to the lower bowels. There is plethora of the mucous membr: & somet. infl: terminating in ulceration & sometimes in mortification. The reason why there seems to be more pain in the section in Rad. is more largely supplied with nerves.

The mu: & muscular tunics are closely con:— When we have infl: in the

one we will find morbid
contra: in the other wailing
pain. Hence what weils
the mucous membr: tries
increase the peristaltic ac
tion.

3dly Let us consid: the
condition of the vessels coll:
lecting connection with the
bowels &c These are the liver
the spleen, & Pancreas —
with respect to the liver
we have the means of
judging of the state of
this organ & in the dis:
which we are considering
we will find the liver
affected. Some think the
a primary & others a
secondary aff= Both the
facts are in error or far

gone to sleep.

In cholera what is the pathological condition of the liver. Many of you will say there is increased secretion. This would be true in some cases but not in all. It will happen in adults that there will be large quantities of bile yellow &c. thrown up. That the vomiting & increased peristaltic action is owing in some instances to increased flow of bile cant be doubted. If there be. it follows that if the bile ceases to flow the vomiting &c will wear off &c. & that this secretion increased the liver will be liver itself. The functions ceases the fat accu. It

Seems to be in mild cases
do commence in the liver
& then occasion what I
have just suggested. The
fact I say there is an
increased flow of bile
in some cases. but were
a physician to stop here
he would be no better than
the common people. The
most terrible cases are those
in which the secretion is
diminished or entirely sup-
pressed — & we have it
occurring from vitiated
secretion. All these no-
sities will present them-
selves in the dis: called
<u>Cholera</u>. In Diarr: it
is formation & discharge of the
bile &c &c.

In dysentery the is a defect secretion of bile & hence a total suppression. These are subjects of importance for your consideration.

4th We will consider the pathological state of the skin. In our case the dis: the skin is involved. Its vital susceptibility is impaired & its exc: of perp: is greatly impaired or suspended. & its exc: is diminished. All this may precede the development of dis. Or it may come on after the dis: has shown itself.

5th Let us compare the symptoms & sympt: in your case. We have cond: R

of the skin. In all these
diseases the heart is more or
less disturbed in its action.
Sometimes its action is de-
bilitated - & again its en-
ergies are increased - & we
have fever. We must
look to the cond: of the fun-
ctions - & be satisfied to
bring it of one sort &
again of another.

In the 6th class - we
consider the brain & nervous
system - the whole the
strength is brought down
rapidly - & we have spas-
modic action of nerves.
Even we to paralysis. Mind
muscles are thus not have
no smiling &c. The action of
the arteries the capillaries &
veins &c; to heart &c.

and with to a morbid action
of dyspepsia, we have cramp
in the lower extremities. This
is considered almost pathog-
nomic. Such are the
leading phenomena in the
affection we have been consid-
ering & you see how closely
they are connected.

Causes. 1st of these
is act on the nervous system
by unwholesome diet & drink
If you taste in diet perhaps
you will have cholera or di-
arrhoea. Just if you taste
in an unwholesome meat:
poor. Malaria is said
to exert its influence in produc-
ing diseases. because they
prevail in summer & are
epidemically. & that the
accum is con: with inter

remitting fever. I must confess I am unacquainted with. They arise from this cause. but they unquestionably do not arise from Variation in temperature of air - whether from cold or moisture. It may arise from cold shifting perspiration. This cause we will find occasioning when malaria is said to exist. when there is alternations of heat & cold with moisture. This is a question yet sub judice. Many cases of diarrhea & dysentery are referable to this alternation.

In all these maladies you will find heat too, in abdomen, increase

with disordered functions. In the other. Now when the blood has accumulated in the jugular vein has it found it could rest in the cavity of the cranium; for then the other hand apoplexy. It has left the external canal. It seems to me it is accumulated in the abdomen: viscera in the portal circulation. Especially the liver. There is then congestement of the portal circulation.

Now suppose an injury effects within there will be an alteration of the skin I have just observed. The blood will be accumulated in the internal organs

When this is the case the nervous fluid will be affected. The sensibility will be affected. The perspiration will be affected by the loss of nervous energy & consequently it will be expended somewhere else. I say then that this influence sent out from the head is of a convertable kind. Now when you observe that the perspirable fluid is checked - when the secretions are thrown off is retained by a course of diet will it generate. The sensibility of the liver - the

Clamant de mille lu Dis-
ased morbid from the ac-
cumulation of blood & the
afflux of nervous energy.
At same time the mucous of
the stomach will sympath-
ize — the bowels — & the
upper the lower bowels —
their rise in this to
Chol: Diarr. & Dysentery
& you may have the bu
to secret mucus initiated
hence it may act or
not act — By nervous
energy may be so mitis
that it cannot secret —
You will find that all
these organs are limited
as it were by the blow-
ing the liver by an increase

may relieve his congestion.
You will find that sound
that the liver is defected
to in all these affections
there is a cutaneous hepato-
dyspepsia - & then the
Brotherhood will like yo
the irritation always
commenced in the mucous
membrane from sinus
to duodenitis, colitis - fau
tritis - That this is the
function deliciens of these
disease. These apparently
obvious discrepancies must
be combined. There may
be an irritation developed
in all these organs
at the same time. It
may occur in the liver

It may take place simul-
taneously in all the organs.
Let us pass to inflam: &
both you when speaking of
dysentery that inflam was
not necess: for this dis-
so I say these dis: that
we are now considering
may occur without any
inflam: — but you may
have inflam: got up in
these organs giving rise to
all these diseases. You may
have violent peritonitis spring-
ing up from the same cause —
connected with hepatitis,
dysentery, cholera cholera.

Treatment) 1st of chol: nor-
mus. This may be a sporadic
disease or it may be epidemic.
In the U. S. when it is epidem

The weather is very hot. generally
comes in June or July. On the
whole it is a precursor of an-
lumnal fever.

Great muscular lassitude.
nausea. epigastric distress
amounts to pain. vomiting &
diarr. — intense thirst. cramp
or spasm in stomach —
spasm in abd: muscles. &
lower extremities. heat head
& body — in severe cases total
prostration of powers of
heart — Oft proves fatal
in 24 hours — In West Indies
oft in 4 hours. When it acts
as if a poison mustard
been taken. As we have
seen in some cases great
increase flow of bile. These
are most favourable cases.

Prognosis. The more violent the onset of the dis: & the more suspended is the flow of life - the more dangerous is the disease. When it occurs sporadically it depends on some irregularity of diet or gross exposure. This at any season of the year will induce a paroxysm of this malady in persons predisposed to it. In warm weather when it prevails epidemically no phy: should give his preventive advice. It is avoid non naturals but are the exciting causes. avoid the heat of the day. & the dampness of evening. & avoid irritating ingesta

Advise our patient against all stimulating food & repeate food - but may excite vomit in the stomach. In addition the taking of an emetic or of an emetic cup - when the tongue is furred - persons conjured devils often prevent an attack of cholera. You may sometimes ward off this dis: by the exhibition antacids - as of Zviij or Zviij of magnesia. You will correct the acid wh excites the dis: & brings on the spasmodic action of the stomach &c.

<u>Autopsy</u> - The upper portion of the stomach & bowels often exhibit traces of inflam: & even gangrene - They have been purely gastric -

enteric cases. But cases occur wh on examination no trace of inflam: any where. These are those wh consist in a failure of nervous energy & morbid nervous irritation. &c

<u>Diagnosis</u>. These two forms difficult to distinguish. both attended with failure of strength & acts of heart &c. The majority of the cases are of the latter kind.

<u>Treatment</u>. If found act: of heart increased & tense & distinctness of apparatus & wh the pt: may pant & cup the expectation of this last alone. At the same time & wh deband

on cal: & opium in large doses. five Mem in powder. Repeat to 11 gr opium const: vom. Let Mem be intimately mixed. They will be retained when the stomach rejects almost every thing else. If the dis: consist in irrit: nerv: the spasmodic action will be allayed & the general irritability of the system will be tranquilized. The prescription for mag: is commended an adm: one in many acute inflam: abdies. Perhaps this is too large dose. You need discriminate according to circ:. Dis. must be a

decided inflam: present in
the prescription will assist you
in your diagnosis - Then
the pulse will rise - The
heat increased - & then you
will discontinue the opium -
it does not agree to Mr. &c -

Let the diet, be of the
lightest kind - Give the
saline mixture - Antacid
drinks, &c.

Salt & chicken water bone
tea & lets the bowels -

External app: should not
be neglected - At a very
early period wet in tepid
cold - immerse them
in a hot salt bath - This
with an emetic cathart - adm:
in early stage will do an

confident will check the
dis- But if the feet are
are cold use the bath
I have seen very
stimulating fomentations
of the clothes dip in the
hot water of spirits or
of warm very warm water
apply over the stomach -
Dip a cloth in very wa
water & apply it immed:
over the stomach & hold
it there - will be more
useful than all the medi-
cines or fire anline you
could use - Let it be as
warm as it can be bear
to treat sudden - after
wards apply the dry friction

After the paroxysm

let him use the cipher diet
the mucilaginous, lacty of
animal &c. & let him avoid
all excesses — use broad alg
warm clothing —

6 Col: Infantum — occurs
in children — & in the second
year — in the second sum-
mer — it prevails epidem-
ically in the summer seasons
& shall not enter into a
detail of symptoms — It
is attended with more fever
than the same dis: occurs
in adults — more thirst —
the brain is more affected
with inflam: spasms —
heat, convulsions — &
body also it is more
inflam: — vomiting more
— & pasted excretes & are

Arachnoids associated w
it. You are not to infer
all cases of this kind
& we have clear evidence
that inflam: is not nec
ent - we cant exclude the
diseases from the phlegmas
ial diseases but can we
all cases admit them in
that class of dis.

Treatment. It in many
cases is required - frequently
use leeches to epigastrium
in the febrile stage. In
this way you will relieve
the infl: of brain - Bow
many apl: cold apl: to
the head & extremities -
If the feet be cold re
sort to a bath leg
stimulating bran. that so

commended for adults. You
may make use of the
hot or warm bath. immerse
the child into it for a
few minutes. it carries off
the superabundant caloric &
~~[illegible]~~ the bad humours.

To allay thirst avoid
drinks. They will keep up
the vomiting. Cold water
is one of the worst drinks
you can allow your little
patient to keep up the
vomiting. Strong hyson
tea will often allay the
vomiting.

I wld give medicines
as calomel. in doses of 1. 2.
or 3 grs every 2 or 3 hours.
as the febrile symptoms
abate continue the calomel

Opium - continue the
Tinct until a literally
insensible coma is brought
on - 1/10 gr of Opium with 1 gr
of Calo: is a medium dose
I believe it one of the most
valuable remedies we
can use. Direct your
Opium according to the
inflammatory symptoms &
pressure. The calo: acts on
liver. &c.

When it becomes chronic
& diarrhea is present we
will speak when we
come to treat of chronic
diarrhea.

<u>Diarrhea.</u> During the
hot weather and cold are
frequent, diarrhea will
recur with more ease

vomiting. In these cases the discharge will be copious not only from the lower bowels but from the upper portion. Undigested substances will be ejected or half digested.

This malady may occur under a variety of circumstances in connection with many other diseases. If persons may have a catarrhal or a diarr. come on. Diarrhœa may in extreme cases in extreme cases. The same occurs in typhus. The liver may be in a state of congestion connected with the disease and occasion of the various symptoms. The stools may be of undigested food in fact to this indication. Food to be the compound of

The food being imperfect-
It takes, leads in fevers
not being ill, & brings about
perfect health. In short
any cause that increases
the sensibility of bones & calls
into action the cerebral ner
action we will have dis
ease. On the other hand
if we have mitigate ind
ter in the intestines from
any cause we will have
diarrhea - from this irri
tating effects.

When this Dr: occurs in
the summer & is the mem
ber of these diseases. Opi
may consider: the Dr: of
derivers. in Lon: Opr. will
observe that the treat it:
Dr. [illegible] action of the

mucous membrane. This
is an intestinal & not a
stomachic irritation. This
disease may become as formi-
dable as any of those dis: of
the & have been treating —
The discharge may be
in the mucous or bilious.
This may carry off the
diseased action. When it ex-
ends from irritation into
the mucous membrane of
the intestines &c. When it is
accompanied with, cause of
spasmodic action. When the
quality is changed — Then
we must be guided by what
I have before indicated
to you. Let the diet of
every pat: be simple
& nutritious &c — If there

By exp. science the
inflam: action. but the
disease may be cured thro'
Endeavours to ascertain wh.
or wt the dis: is, in a
You will see the
disorder described, its
origination dem: cir: &c &
treatment. Occasionally you
will have increased arterial
action then you will a:
wakened inflam: relief
The dis: is turned in wat
as Sydenham long ago ob
served. The dis: I wish
will diminish. The
mouth will be dry. The
tongue will become parch
& dry. The delirium will
be simple in quality. Di

Inflammation in this is so
constant and so of the
Fluids thro' the intestinal
canal.

Treatment. This dis.
depending on various causes
will require an accurate
observation of circumstances
to get the proper one. In
many cases it occurs in
persons an antiphlogistic
will seldom be called for.
An emetic or an emeto-
cath: will often do good.
In some cases purgatives
will be useful. These are
cases in wh there is so
spasmodic expressions
of the morbid circulation.
The cath: most proper
will be hydrargyr & the

cholagogue. Relief may
arise of the patient - but
bring about a cure by
causing a more violent
diarrhoea. When your
patient is reduced by
cage &c &c - give cal: &
opium. You may unite
with the exposition of
Ipecac: - This often will
not be attended with
inflam: action. In
many cases it will be
best to adm: the blue pill
It is less irritating & will
not so soon produce
salivation - The cal. & pill
& blue mass may be
given at bed time - &c -

In some case there will be great acidity - give anti-acids - taste the alkalies - soda - lime water will be the best. It is a temperament you can't give the magnesia it will produce purgative. Galls - cinnamon - kramaria etc - the vegetable astringents will also be useful. You must attend to the skin - Let him wear flannel. The flannel should always lied loosely light around the abdomen.

<u>Dysentery</u> is almost invariably an inflammation of the mucous membrane & hardly ever from irritation. You may have an inflam

superveening on irritation.
& when it alights on the
lower intestines most fre=
quently brings on dysentery
Sometimes the dis: called dy=
entery may depend only on
irritation. This may be
concluded from the man: in
which they are cured. The
difference of the phenomena
is very slight. When we have
heat, tenderness of abdomen
&c we may call it dysen=
tery.

It was supposed dysen=
tery was attended by con=
tiveness giving rise to
spasms &c. Dysentery often
is connected with an infla=
of the whole intestinal canal
but most frequently or
confined to the colon &
rectum.

It is sometimes connected with fæcalent discharge from the lower bowels, while the upper portion will not be affected.

Dys: is not so often a sporadic affection as Chol: or diarrhœa - we mostly meet it as an epidemic. You will find that all fevers - small pox &c. do prevail at certain times & then again disappear. These are called epidemic diseases. Of this class I consider dysentery. It will often be connected with some form of fever - of a gaul: ty: pe. I have seen them rising & falling together.

I am not telling you

anything theoretically. I am but announcing to you a fact. You will hear all this blending to be true. Not they seem upon us then leave us & again return like comets that leave us & we know not whither they go.

Causes - On this I shall not say much. When Dysentery occurs with fevers or as a substitute for it. They often take the place of fevers. Wh. you see this fevers in connect. with Dysentery you will easily be led to the conclusion that it may arise & does from the same cause. It is a fact of common observation confined to a diet of a particular kind. we

have a certain sympathy — whole armies have been cut off by it while the surrounding people were not affected by it. Hence it obviously must be their diet. Arrived that is most liable to produce the dis: — not salt meat but fresh especially beef. This has often been its cause in camp. & the dis: will continue after the diet has been changed. This seems like a propagation from contagion. probably arised from the foetid discharges. The fresh beef taken so abundantly by soldiers may give rise to the dis: by some kind of decomposition. To show the contrary be

animal & vegetable food.
In ~~the~~ French Corps, we
approach of dysentery. The
Gallery were turned into
a wine yard & they eat
a large quantity of the ripe
grapes & the dysentery ceased
entirely. This circumst. is
related by Dr Jackson.

Treatment. In many
cases of dysentery, the sick
Man can generally cure himself
yet sometime it appears
of so malignant a form
as to resist the remedies
offered. When the whole
tube, from anus to colon is affected
with inflammation. The dis. is
most dangerous. When it
occurs without fever
fever. it is easily cured
but when it comes on
with prostration & Red

hot & dry. Mucous fecal,
tenesmus frequent & clots,
small & bloody. &c.

It is difficult to say what the
indications of cure are. The
first indication is to remove
the morbid state of the bowels.
Our object will be
to cure the inflammation in the
bowels. But to do this we
must attend to many
things. There is no one
simple thing we can do.
We must attend to
In the first place we
must draw blood both
generally locally. especially
locally. You will un-
derstand it to remove the
inflammation. bleeding generally
will be better. but it may
not. often be obtaining

M: shall be employed in the
early stage. In two in=
stances of bloodletting must
must be governed by the
head & skin &c. Our
first object will be
to state the summit
intestines - & being back
the healthy secretions -
This is effect: from V.
purging, cupping &c. You
must adm: freely mucil
ilage - whey - elm bark
infusion &c. in connect:
with these minute por=
tions of Antimony or
Ipecac: Give them not so
as to produce nause - At
the same time you will
adm: freely cal: opium
Ipec: &c. to tranquilize

the bowels &c. & increase the secretion of urine &c. The next thing you will do will be to open the bowels. where every man is unfamiliar active adm: Gilmens. P.S.- cal & opium &c. & after you have thoroughly the bowels - adm: oil, mucilage of sweet almond. Drops &c. or if this dont please then give Sulph: Magnes: with Tar: Ant: in small doses. with Tinct: Opium give them in a drink of Cates- Avoid Ammonia Camphor, Jalap &c. After have conducted the case patient thus more successfully & obtained large discharges of scybalous fecal matter bile &c.

You will find your patient much relieved.

It will sometimes happen that the stomach will be found much impaired. acid &c. the food will remain on it. & not pass into the bowels &c. when from the symptoms you judge it best to let the state you will obtain great advantage from the exhibition of an emetic. The effect of it does not stop at the stomach but it extends to the whole system. When there is acidity of the stomach & bowels you add adm: Magnes. This will be harmonize

with your other means.

In his despatch to Genes-
ral. We must keep our
halliard in a recumbent
position. Let him pap
his stool in the close
pan. You will give
the Genesman with in-
jections of blood & lard:
warm. - warm about as
bad as possible to bring off
the blood. Or if fors
some civ. the pat. can't
bear the injection pipe
use a suppository of opium

You will at the same
time attend to the abdo-
minal flannel next the
abdo. & the flannel
roller. You have read
of Dysentery being cured

by small doses of Ipecac.
This subs. in conj. with
cal. Opium & will do
of great utility - use frict-
tions - warm bath &c -

Use vegetable diet -
light & mucilaginous -
When the dis. is bad let
your patient diet low
very small -

Chronic Dysentery is
attended by red tongue -
fever in the evening - ti-
redness - sometimes costiv-
ness - pains - with often
appearance of purulent
discharges. This will
depend on ulceration
of intestines wt may
take place in any part

tion of them. Astringents will often be often be beneficial. Of these the metallic astringents will be the best. I prefer the sulph: iron with finger-to opium or the sulph: of copper. The nitrate of silver or even nitric acid from its effects on exter-nal ulcers we might expect benefit but we must correct the acrid of the bowels & skin. Simple sal: or blue pill & Epsom salt perhaps use flannel. Keep this part warm & occasionally the warm bath may be tried.

Colic

You will find in the book many kinds of colic described. You will find have biliary colic, hepatic colic, nervous colic. These terms are apt to be perplexing to the student.

We have colic appearing with pain in the region of the colon without diarrhoea. The bowels are often in a costive. There are lack and not attended with bile or mucus. This disease may implicate other organs besides, viz. to biliary derangement. Now if a cow with pain you had tenesmus or you would have dysentery.

if you had roundly along
with it you wold call it
Cholera. & it wold actually
be a case of Cholera. It pre-
sentes but little discrim-
ination to distinguish it from
dence you see the ina-
bility of these terms I have
before alluded to. In chol-
or hemorrhage the cont.
of the mucous coat of the
intestines with bowel-
this is not inflamed. Diar-
rhea from colic so called.
If the coat is very contract-
ed it will become perma-
nently so. In colic as a gen-
eral fact you will have
costiveness & seldom vomi-
ting.

In dysentery there is a
close resemblance to this

discard. In dysentery evacuations usually takes place from the lower bowels and there is a retention in the small intestines. This arises from a constriction of muscular coat of the intestines. Dysentery may be called colic with tenesmus. This is the only distinguishing mark. In autopsy you would find some difference. In dysentery you might find ulceration while in colic you would probably find the inflammation or lesion in the peritoneal covering of the bowels. Colic does often depend on inflammation. It generally produces death by

nervous irritation. This arises from morbid contraction of muscular fibres. They become distended by this action. This produces an inability to again contract. It is this act which produces such lesion of the nerves as will destroy life. I have post mortem examinations can discover no trace of diseased action.

It has been said that Brain: at Mean comm: when inflam: & as they progressed they became nervous. & that when we were called to a patient in labor, there were no symptoms of inflam that we think that it is an act of irritation. Nothing can is more tender than

This Colic may arise from
inflam: & inflamm: is a
secondary affection. This
may not always come
on - but when it does
you can easily see
that we will have some
thing very serious added.
but our therefore will
be to anticipate this
occurrence.

When does this inflam
occur? If in the mu-
cous membr: you will
have dysentery you will
say. In this point the
facts are wanting - but
from my experience it
may come on in any
one of the tissues. but
that is not likely to

occurs in the mucous & most frequent in the serous & muscular & both in some cases from rise to ~~peritonitis~~ &c.

You will observe that a morbid action of peristaltic action will constitute colic &c. When an intestinal hernia becomes strangulated by inflam. like that of colic will be the consequence. Therefore in case of colic dont readily yield to remedies you think suspect hernia &c. You may have the intestine folded in an anthrax - call inspiration or intussusception - when this occurs you will have symptoms of colic - You

will admit of no remedies under the strong hope of affording immediate relief. In non-specific cases you will be disappointed. The diagnosis in this dis: is not easy. Then again we have biliary calculi giving rise to the most painful of abdominal colic pains. But you must not confound it with a case of colic. Then again we have concretions in the bowels. These appear in balls of hair or short fibre or hair. These are not uncommon in brutes. Do not for the mind has written

the best work on this subject. This constitutes intestinal colic. The symptoms too well resemble those of colic. You will have stricture in the rectum wh may be called a permanent spasm. & then again you may have fleshy excrescences or tumors or a thickening of the intestines which will almost close the canal. You may detect it by your finger or by a bougie. This will give rise to the phenomena of colic.

There then are some of the affections which resemble colic —

Causes. Constipation of the bowels predisposes to this malady. This is nothing more

Can a deficiency of the peristaltic action be attendant on many diseases as dyspepsia &c. Improper articles of diet & sedentary habits - want of mind & hard study - neglect of a regular internal period of evacuating the bowels. temperament also influences it - the bilious temperament a morbid action produced in the fibres of the muscles about it - a tendency of retention. morbid irritability of the sphincter ani or a spasmodic or anomalous contraction of his muscles - these are the causes which give rise to costiveness - In constipation there is the secretion of the mucous mucus of bowels - heat discharges from the other with in=

duced extremely. but during
the warm weather the secretion
of bile will be abundant &
when this is the case cholera
will not be present.

Constip: is one of the
predisposing causes of chol.
& hence it will be our object
to remove it. Our object in
the first place will be to
remove the remote causes.
attend to the patients habits.
Endeavour to let our patients
attend to regular evac-
uations. his diet. carbo
hydrat food as will excite
the bowels into action. the
farinaceous vegetables possess a
laxative quality somewhat
resembling that of jalap.
Again it blends with the
other principles. Hence our
sweet potatoes and

suitable for costive persons. Corn bread is more aperient than any other.

Med. treatment. You will be obliged to give med but upon the other hand I shall depend more & more and you some medicines. They are all infallible cures. Blue pill & jalap aa 48 gr & Opium 11 gr. make into a mass & divide into 36 pills. Let proper doses be taken before supper. Blue pill & Rhei aa 48 & extract colocynth 12 gr. make into a mass & divide into 36 pills. 18 gr ℞ Ant. Ant. blue mass & aloes aa 48 grs. This is more opening on the bowels. ℞ blue mass, aloes, & capsicum

at night. This acts rea-
tively. In some cases you
may use cathartic & purga-
tive. Give these pills so
that they may operate
in the morning. Never
fixed to act actively. Let
them operate as laxatives.
When urgent let them be
taken at bed time with
hard but then be taken be-
fore sup. The fixed of
Rhei & aloes of the Ge-
nerators is unique in
constipated habits. The
infusion of senna & tam-
arind. The infusion of jalap or
senna. A good laxative
& tonic is gentiana to the
bowels. You may produce
a bad or anomalous. Stam-
ina, talent & genius

making a constant use of the kind of stimulants. In constipation of the bowels there is a tendency to inflammation which will yield to Magnesia or Epsom salts taken in the morning. A small quantity will generally suffice when taken in the diluted state. When you have to administer this or any other cathartic in nervous temperament you will do great injury.

When you find colic in persons habitually costive your first object you will do is to obviate the habit.

There has been an idea that colic is called flatulent or wind colic. What

4 Mrs. The patient complains of weakness, pain from a malign expands. Depression, want of appetite. Cant use the abdom. muscles in defecation. He has rumbling in the bowels. When these comes with the has been exposed to cold, or eaten acid or cold drinks, or indigestible diet. This arises from accumulations of fæces &c. Or it ~~becomes~~ comes on as it arises from an inability of the muscular coat of intestines from keeping out the flatulency. Great pressure over the part will afford relief. It consists in a morbid state of

the nervous function — so called weakness. It may from partake in weak nervous habits.

Treatment. being a paroxysmal dis: you must prevent the recurrence of the paroxysm. Our stimulants internally & externally will relieve the paroxysm. A flask of wine — ½ ounce of peppermint-water & a rod &c. The act by which heating is produced: warm baths will relieve it — tonics esp: externally — prepared at the sanitarium. Injections of infusion of assafoetida or morphine. When the

Dont need you may
give opium or 60 drops of
laudanum. & you may
look! cat! with the opium
to correct the function
of the liver. & it may be
beneficial the implan:
acemy

Preventive means. at-
tend to the state of the
skin. regulate its tem-
perature. flannel to be
worn next the skin. fric=
tions. bath in ablu=
tions & come to our na=
tive country if the dis=
ease. or jaundice. or
you may resort to the
cupriate. The subject mor=
ning & night & nor. with alcoh=
ol.

Bilious colic, ileus. Hysteric colic & colica pictonum will next demand our attention.

Colica Biliosa. You have all heard of persons dying with bilious colic. & these generally men & of a sanguineous habit & good livers. Now not colic occurs in such individuals we may expect this form of it. Hence you see colic is modified by cond: of the patient. In bil: colic there is a high condition of the system. The prototypes of nature are carried to their extremes. Now when the acens muscles contract & forced

obstructed & you have it
naturally the colic. but take
from the last Hospital Nosology
called Dysentery this form of
dysentery & you will have
a case of flat: colic. In
this form of Colic you will
find: 1st bilious vomiting
high & hard as tightly bound
preceded with the bilious
& constipation, flatus, fecal
accumulation, distention
& then will come pain
in the bowels & the
usual dysenteric pain
1/2 or 2 hours. Indeed
inflam: is very apt to
be developed in this dis:
These are but species of
the same class of forms of
disease. They often run into
one another & the difficulty

of diving. Man will be difficult.

It will not come to 2 by symptoms of this dis. You observe a person of the plethoric habit use coli. ie spasms - flatulent distentions - with occasional bilious vomiting &c &c.

<u>Treatment</u> - In most cases you may begin with opium or Pulv Cal. But if you found injurious and hard - then let. ie you would give Pb. This in such cases is absolutely necessary & should not be neglected. It will reduce the tendency to inflammation. If you neglect it you will find it difficult to move the bowels. inflam will come on & kill patient well

die without having his bowels opened. After you have tr. two or three grains of calomel & jalap on bowels. You may go on his injections &c. Now this embraces nearly the whole of what I have to say of the treatment in this malady. What was said before of tympanitic abdominal applications - &c will be proper to be recollected here.

It is not by purging in these cases you cure your patient. This occurs after your patient is relieved.

Hysteric colic. This was long ago treated of by Sydenham. You will find what he has to say on hysteria in his essay on small pox. vol 2 third edn.

but it has not been prevented to the profession.

Becomes of a lymphatic temperament & who are generally great livers well known hysterics colic. it occasions to the bilious colic in men. Pain have violent griping pain with vomiting & yellow bile - the bile allevia the something in the stomach. In this there is not much danger of inflam:. Now observe then it is difficult the bilious colic in men. I have seen many cases of this colic.

Treatment. - 1 com: cath: eliminants & tonic. - 2 com: cath: cal: & opium. - ℞: Hyd cal 1gr. & aro. some aromatic

stimulants. In some cases it will be necessary to give the spir: & aromatics alone. The tinct: of lavender. R cinnamon., ac, & vermint. Castor. Valerian & any of the spasmodic stimulants are always useful. But these will have to be changed. You must understand it stimulants not produced a decided impression to day, to morrow it may. hence it becomes your part to change from anti spasmodics. This seems to be a loss of the nervous system. Sometimes great benefit will be obtained from emetics but will afford relief in the remedies proposed.

Colica Pictonum. or colic from lead. because it is produced by lead. Colic is the specific disease of lead as salivation is the specific aff: of mercury.

In some counties in wh painters respels are used this disease frequently. when any acid comes in contact with the painters lac white lead or salt of lead. & dif acids. do act on glazed respels the dis: in this consideration will be induced. The carbonates & protocarbonates of lead prior to this disease. These are frequent found floating in the atmosphere & may be inhaled into the lungs & again be swallowed by being mixed with the saliva. Persons from other

ing in newly painted rooms
have taken this dis-. It is
being where this metal is
volatilized. It too undoubtedly
acts thro' the medium of the
skin. It gives rise to the
malady by the constant &
gradual introduction into the
system.

The dis. universally af-
fects the system. There is par-
alysis of many of the mus-
cles. There is a disordered func-
tion of organs thro' out
the system. There will sometimes
pulse serena. The stom-
ach will have lost its tone &
the bowels will be disordered.
There will be great pain
felt about the umbilicus
& the abdomen will in many
case be flattened & that
the pulsation of the aorta

will be felt. but again there will be a distention of the part. There will be pain in the back. There seems to be a deep smitting of all the nervous energies.

The post mortem examination should exhibit much organic lesions of the part. You will sometimes in the bowels a want of the natural colour. a whitishness of appearance. but occasionally there will be traces of inflammation in the bowels. Spinal marrow & in the brain. This disease strictly operating as neuralgia affecting with paralysis.

Treatment. Now as long as the remote cause exists you cant remove the disease if you pat: be a painter - or one who attends on hard manufactory & you will advise him to quit his trade.

B. in this dis: will seldom be called for - yet when the bowels are difficultly moved we shd P. consid: quantity & will predispose him to the act: of cath: When the abdom. has fulness & distention you may P. cup & leech or only the latter according to circumstance - but object will be to allay spasmodic action & have

cities & active cath-
Opium it is said will
assist the warmth of
feets of the bowels - but
the opium you may trust
cal: suffering in some
instances to cause seli:
sadness. Tho' I have sel:
dom found it necessary
Senna & salts. is a sal:
uable cath - the mag
ADm: balsam of Tolu. or
any of the stimulating bal:
sams. You may pass
fomentations, & anodyne
Salaps - &c. You will
direct an diuretic bevera
from injections & window
keep an admirable sow
ers. Always write

the Prohibition of Cal & Spirituous liquors you have allayed the Dis:- After the Dis: has abated you may occasionally have part to drink Sulphur water. In the bowels you need still many remedies for this Dis:- but I have recommended you within the last wk my experience has pointed out to me.

Functional Derangements of the Liver

Passing from Mere mechanical wk: which is the intestines to our course to consider the Dis: of the liver- it cannot be necessary speak of the Dis: of this organ among

Inflam:- Then are indeed
the morbid affs: of the
liver very rapid:- But
how can these be? What
disease then can arise which
will not be either acute
or chronic?- For the equi-
tor I will direct your
attention.

You are in the
first acquainted with the
anat: & phys: of this or-
gan- It is here function
ally to inform that all
the blood of the chylopoietic
organs goes to the liver- The
portal system of the venous
portion goes to constitute this
organ by its constituent
bases- Hence we call
an organ of hæmopoiesis

In this respect it resem-
bles the lungs. The tubes
of the vena portæ are ex-
ists millions of little tubes.
The ON office is to trans-
fer this into the biliary
duct. This it forms from
the blood of the vena portæ
& the secreting portion of
this blood is dist: thro'
the vena hepatica. The
bile then secreted is tapped
into the gall bladder. We
have four dif: fluids in
the liver. Two kinds of venous
blood. Arterial blood &
the biliary fluid or the
bile. It is evident that
the blood from the viscera
of abdom: must be dif: from
the venous blood derived from

the arterial blood of the hepatic artery. ~~good~~ but of this has been formed the bile (i.e. the portal blood).

Now that the liver fail in its function of secretion, it is evident that this will become developed in the abdominal organs. For example the veins in acc: of it in the hand. The origin of this portal dis. consequently the veins in consequence of these diseases. Now may arise in these organs inflam: torpor or loss of energy of function.

This is a matter of the

treat of importance. It is well known that in hepatical cases the subject becomes the abdominal organs. Now it is necessary to understand the physiology to be acquainted with the pathology.

We may refer to the other functions now, to the function of transformation. This seems to be a change of the elements of the blood into a new fluid. The amount of this is very great. This disposition of bile from the liver must be considered. It mingles with all the faeces. It is often formed up in large quantities.

The lines say great cloud
to explore. This we will
be able to conclude, and
the right amount of fluid
it is sent to it. This
too will lead us to the
right point of hanging
formations must be made.

When we have two
recent corners of disease
there & or believing mor-
bid may arise premature
in the liver. & that acid
this may death, lead
to more infection. taking
blood mud. This is the
point for you to investi-
gate.

Now it is unknown
& agreed: we know no
more about it than the
phenomena presented —

You have from this very
new deceitions - formality
detail - May not the
secret of this be explained
by the inflam: in its
Reports? Now it seems
to me it may. & may
be analyzed in its con-
ceptions & without inflam:
If it be true the heat
as its secret: can be ex-
plained without inflam: the
here seems to be nothing
in consequence to this! &
this organ: endeavour
to explain.

In various, lands of the
header we see organs may
be affected without exten-
tive the functions of de-
ciation. May we see the

places in the Endocardium it may not be seen in increased quantity yet deposits of cal: matter will take place. Also this may take place without inflam:. It may wholly depend on loss or morbid action of nerves. This same thing we take daily place in the other. Effects of fever will be determined & ending disappeared & no inflam. will be found or any where. Obstruct to the flow of the blood in the large canal will give rise to disorders & no infl: will be present. Of the same kind we have

many instances. Now
here is an example
of great impairment of
function independent
of inflammation & if it takes
place in those who live
as we do, that it may
not in the same man
arise in the lungs? The
vital property of the lungs
seems weak - it is not
supplied with many nerves.
This want of strong vi=
tal powers, the blood con=
tains cannot may be be=
layed in the tunics &
roots of the pulmonary
tube - It indeed seems
more than probable that
air may arise here
wherever impl: anywhere

All the functions are influenced by nervous excitation & this may be transmitted to the liver. & from this cause independ: of inflam: action: may opening up in that organ.

An inability to transmit will be more evident in its effect than ~~from~~ an inability to transform.

If act: bil: acid is distant from a failure of transformation in the liver. but is the is inflam: in the liver it precedes the fall: of transf:- you will have a very clear class of phenomena appearing - & if the fall

did with you will have another kind of morbid phenomena. Thus you see this may be produced from two lines in three ways. But we are now only concd: this of lines acting without influence.

In the 1st place if the bile is not sec: in sufficient quantity we will have the not sec: but in the blood. When it is sec: it performs a function. But is this the only influence of its sec? This I know to be true this is deficient sec: of bile we have the accumt: of the elements of the bile in the blood. And

it seems a duty necessary to
do some something good
the blood relation to
the vital functions.
The effects of the bile
in the blood as among in
jaundice is known to
all of you. There is a
failure of all his functions
his senses, both intel-
lectual & corporeal.
The imagination is ex-
cited morbidly. He con-
ceives from his insanity
that his days are num-
bered. That the demand
demons torment him
The feeling from his
disease. all
this is the hideous im-
ages, the symptoms gen-

rise to it. A healthy healthy chyle will be formed. The bones are conjoined for the want of this nat: stimuli. The whole system will sink. Dr for the absence of the natural stimuli of this fluid to the intestines.

If the liver be deranged its secreting funct: we have seen the whole in elimination of the worst of the bile in the blood would occasion a balance in whole economy. It matters not if the blood we have been da Rev. out. & did not not attempt to point out all the

derangements arising out
of this state. I feel bound
to show you the facts
to shew how it has
over the same ground
on such occasion.

Now after having
spoke on this point we
come to speak of those
who arise from a want
of bile or from its unhealthy
quality in the bowels. When
there is a defal: of secr: of
bile in the liver there is a
want of ordinary stimu-
lus to the bowels. Your
system has effect
various parts of the
body this sympathy
with the bowels even

The liver itself feels it — they fall into a state of atony — this sympathetic proves the liver will also be in an atonic state. Hence the liver fails in one or both of its functions, & then it will not secrete bile into the duodenum. & the bile will be in the stomach & bowels & will be compelled to have & still more derange its action.

Now the offending cause in this case is in connection with this state &c. & spoke of the shyte found in this state — how significant it of course must be.

The faces will be change from hairy kind. From this absence of bile we find

have dis: in the abdom: viscera. We will have dyspepsia. Hence dem: sec: of bile may lead to dyspep: - Hence the reason for giving in the dis: Mer: - We have constipation & diarrhea from this morbid or dem: sec: Both of these may be from the absence or vitiated sec: of bile - The stools will resemble yeast. Both in infants & adults - They will have dysp: of bile. Worms or verminous dis: are predisposed from dem: sec: of bile - or a secretion of a bilious fluid to be and - that it will favour the generation

of worms - they in this
cond: of life in mesenteric
glands will become enlarged
& so as the G. will say
it may arise from infl:
This may sometimes be
the fact - but I am con-
fident it may arise
from other causes.
In this subject Dr. Ayre
has written an excellent
book. In this way we
can have <u>always</u> mus-
c. worms. This is the rea-
son why all the books
will tell you that mi-
nute doses of cal: are
always recom: in this dis:
- The first is a dis: cle-
nominated <u>Mesenteric</u> -
consists in a dis: of
the bowels from the
bowels. This dis: I have

been I am led to be-
lieve are independent
of inflam:. Sometimes it
consists in the formation
of red or reddish colour
lilo. In it respect it
will become yellow. but
in all stages of the dis:
it may be called black
lile before you have
examined it. Now this
is evidently a dark iron
the port: ev:. yet it
may come from the
mucous coat of lite-
tines. Yet if you re-
move it you find
it yellow. I believe it
is from the engorged
state of the lives & the
bile throws out this

undergo fluid & rest:
Being of the nature of
the dis: so much as the
aff: injury to healthy
secretion of the bile will
become more obvious. We
if patient goes on to so
recovery the bile will be-
come more & more obvious
than may & often is so
chronic inflam: connect:
with this dis:. But I am
convinced it thus injury
comes on without any
inflam: preceding the
dis:. If any, it may say
it arises, from inflam: to
some but I do wants to
say for this infl: at-on
here. In the 6th place we
have hemorrhoidal aff:
from a morbid or injury:

Dec: of bile. This & from
Obstrd circulation Gen:
Ac: of bile. Hence it becomes
the remote cause of Hem:
orrhoids. This dis: is most
often con: with disturbed
funct: of liver.

We ob: that the skin is
exposed to cold falls into
cond: of a long - wh is trans
mitted to the liver. &c. The
first impress: is made on
the skin. & as a conseq: this
occas congest: in funct: of the
liver. These organs were
sympathizing with the liver.
If then the liver be disordered:
then will derangement in
stomach & intestines. If
the bile be not dec: in
qu: quantity it will

be caused thro' the sympathetic
giving rise to disordered functions
in other organs. You see
there that are various modes
in wh the stomach & wells
be affected by morbid affections
of the liver.

The movements of the
abdominal viscera are complicated
& hence with them
diseases be complicated
& or of the pathology.

We come now to the
part of our subject
viscera. We will not be
content w. merely the dis:
is in a part but to ascer-
tain the cause & post the

When the liver becomes
disordered in its secretory functions
we have a disordered
state of the digestion. Dr Thomson

has dwelt on this point.
The Overloops. The Hydrolic
part of it. When he finds
an acc: in the Odoni, and
it is he who at one dis:
covers this acc: mast wi=
dent. We might just
as well speak of a dis:
tinct calamenon and
de. as of a cutamo. he=
fatic syns: a'ly as Brow:
ton does. But it is in
the genet: of the bird
you will discover the
dis-arrangement. It is dif:
ficult to tell in wh
wh is the other or the
bird the dis: arrow. We
will correct the text of
the Odi will record
of their dis: a'ly about

vertigo. This will suddenly appear. or the same is well aff: & reap:. This dis: is oft connect: with a disord: state of the liver. So it may arise from the stomach. Psoriasis & scaly lichen is such aff: associated with the liver. of which of jaundice when it condition is connected. Ulcerous injuries are oft con: with disordered funct: of the liver & will eventuate when this funct: is restored. Hence good surgeons before practising will attend to this organ. Dr. Thompson book now will find most

of value on this subject.
We have about the head
mean affections which are ap-
parent effects to the
disorder of liver. but have
chronic ophthalmia.
but when we use calomel
the ophthalmia is improved.
but have first head
ache. This is a neuralgia
of the supra orbital branch of
the nerves. This affection
have been arise from
a particular state of the liver
in its secretion & its
transmitting powers.
An order was given
head homoeobled. The
liver becomes affected

the skin. There then will be a want of transformation. All is the skin should be thinned & the liver will transform & the dyspepsia will disappear.

We have hydrocephalus-appearing without inflam:- The pulse slow & feeble. Skin not hot to the touch. Urine- But in this disease we find a biliary function deranged. The brain becomes physiologically disordered. Now when the bile is not secd: in the liver. The blood destined for this secretion is conveyed into the liver. & may not rise to the brain

or in the abdom:- Here you see we may have Hydrocephalus from a cause only by sympathy & another from failure of transporting function of the liver.

In the brain also if you have Hypochondriacis. Melancholia &c. These are often dependent on disorder in the liver. If it be acute in the liver you will have it acute in the head &c & vice versa.

In the muscles of locomotion we have chorea hysterica- convulsions- These are oft connect with the liver- when

you have any of these
dis: you are not to sup-
pose that it arises di-
rectly from the bile but
it is dependent on the disorder
functi: acting on the
brain & spinal mar-
row. The alcoholic con-
throw of the muscular
system is often owing to
a failure of the bile to
throw the biliary fluid
from the blood.

We have as frequently
sometimes connected with
disordered functi: of the
liver. but effi: of a
more serious kind
takes place in the
lungs, then pain as
inflam: in the bronchiae

tubes - in to and dyspnœa consumption dependent on disease of the lungs - from disease cause have Hydrothorax - Hydrops pericardii - be lost with hard disease of the heart accompanied by the biliary blood coming in contact with its cavity - And it will be in cases of nervous bilious temperaments & sedentary habits, you will have palpitations in the heart. But organic disease from this unnatural stimulus which he det w. in the heart.

The relation between the kidneys & liver is intimate. We have a change in the sec. & secretion of bile we have a changed state of mind. It seems to be an office of kidneys to eliminate the unfavorable bile. The kidneys & liver are con. by nerves. by the great sympathetic which arises from the celiac plexus. The cords very nearly across the same organs. Yet they are ~~somewhat~~ anatomically separated yet they are nervously closely ~~associated~~. Hence an increased sec. of urine as occurs in diabetes will arise from dis: current. So liver. We may also trace up the calculous dis: to this lumbar cord: of the liver. Of the parts of the

urinary organs — as we have and irritable bladder. Which of urethra are con: with dis. liver & also morbid sensibility of testicles, a kind of neuralgia which can only be cured by rectifying the funct: of liver.

In the female reproductive system we have dis: con: with disord: funct: liver. When there is chlorosis we will have the liver much disordered — morbid affections. Menstruation is not perfect but we will find ~~always~~ a local difference of life in the intestines. One object here must be

to correct biliary function
in so bilious or
consumptives until we
do this. Often menst.
is established, it is often
suppressed, we will often
find the liver dis. & often
the suppression will af-
fect the liver - & disorders
will be carried into oth-
functions of the body - Al-
ways at, subject. Dis.
liver is the cause of
retained menst. -

In fever & ague we have
when it does not arise
from inflam. we will
find the liver, torpid or
deranged. Our remedies are
directed to these organs
we have proven in Ken

a fine survey of functions liable to be disordered by disordered function of the liver.

The liver is found with various organs & the nerves & is most closely near the stomach. hence the stomach will most sensibly sympathize & it (or S.) will sympathize with almost every part. Hence you see how a single organ may derange the whole system. But it is only the part of the town: of individual action. If they done or turn the blood according to its bias: then will be set up

& if the liver does not secrete properly the bowels will want a natural stimulus. Then again if the liver does not secrete bile naturally we will have the constituent of bile in the blood & we will have it then giving rise to many affections - as jaundice &c.

It may happen that this in the first, leads to doing harm the liver, may produce this in a different form - This sympathetic disease may remain to destroy the patient after the liver has returned to healthy action.

I don't pretend to indicate to you how to

than disorders of the tho
when they do, & when they
do not arise from in=
flamm: of the inflam: be
acute, impairing its powers
you will easily under=
stand the affection
but of the inflam: be
of a chronic kind - with
out full general fever
it may be that the
inflam: being so quiet
as not to irritate the head
& arteries - hence
we must with diffi=
culty to the wh: if be
inflam: or not - your
wise demand advice.
you dont know wh to
adopt antiphlogistics
or not - & remember

cases in wh. stimulants have failed & a diff. course indicated.

It is a subject of inflammation requiring an active cathartic course as when it appears in any of the organs. If we happen to omit them for a time we will seldom do much harm. but if we in many cases resort to an active cathartic course we will frequently do injury.

<u>Treat.</u> An emetic is an admirable remedy in this cond. If it be low. Q. tartar fix relates to hepatic dis. & disorders the liver itself. & I think it would be very useful. & also if the lungs are affd.

it will create a decided advantage.

Catherine. I detest that cant! may have done visiting. When there is a letter unfit! cant! may do harm. but when the sensibilities are long blunted. & the is merely disguised & unbelieve. cant! are our most valuable remedy. They will pin impudence to the wall! cir. They will dissulate the liner. They will convince the fanatic! if they live & are capable a new action in the whole children! of men.

If there be a disposition to dis: of the brain & nervous system. as shown in. we will obtain great advantages - they here act as counter irritants - They should be really active - they this energy be cali: also. Cerebrony - falbanum - & you must be prepared from the deficient cali: as Calcha. When the dis: is of a very chronic kind laxatives - Gr blue, aloes &c - will be the best. those that act mildly - But in cases of phlegmatic habit - brain - of the spid - when

Bilious & cholaeraic
active cath: as cal: &
jalap. In compl: cal:
& jalap — Senna &
manna with ginger add
ed will do good.

Alterative & deobstruent —
Med: given in minute doses
which act insensibly by al-
tering the action of a part
or organ, we call them alter-
ative doses — or deobstruent —
Cal: & blue pill. & Opecac:
ant: inlv: — & Rheum are
the principle articles of
this kind. When they act
mildly & given in minute
portion & increasing the
secretion of mucus &c. By
this, I suppose you find it
is less than gr. in chil-
dren you will find 1/8 to 1/3

The patients health will improve — ℞ — Cal 11 gr. Scam 14 gr aloes — viij gr — mix & divide into pills xvj — ℞ chel drm ult Tumefied abdom: — Dis: Mesenteric glands ℞ — One pill at night — xvj gr blue mass xvi Rhei — 8 gr James pul — mix into xvj — dose 1 gr. to child — When there is great nervous irritability you may comb: with more cert: thing calculated to allay irritability — you may add either camp or 24 gr. Gum 100 2 pills at night — or 16 gr or 8 gr Extr: of Hyoscyamus — or 32 ~~drops~~ — or 9 gr Sulph: or Pseudas morphia — Dont come

Obstate as much as
opium. Now in all these
formulae you have the
blue mass wh acts on
the liver. the Gluc: on
the mucous memb: of
bowels & a something
to tranquilize. Now
you will find the addi:
tn: highly beneficial
in a great variety of
chronic affections of the
bowels, liver, stomach &c
They are not debilitat:
ing, but under their
use good patients will
gain strength, & the
health generally will
be improved. The

extract: of Gentian will
be the best tonic you
can mix these pills
with.

Something you will
want a cath: more
active dose - extract.
Colocynth: Comp: Colocyn-
thal: ā ā ℥ij - Ext:
aloes: ℈ss - mix & div:
into ℥ij pills - give
according to circumstances.
Of all the med: tol you
can use in this & like
ds cholagogue & hydragog
medicines are the most
valuable med: we possess
when you are perfectly satisfied
that they are -

<u>An</u> Injection - for
Mucous dis: I have

Disordered liver is cause of
med: of worms. To cor=
rect the liver will be
our ultimate end. but
prior to this we must
give med: to expel the
worms. They are produced
by improper diet & more
generally connected with
disordered liver. The best
med: for the expulsion
of worms is the Tincture
Myrrh Candicans. The oil
of the Porpentine called
Oleum Porcorum Anthelm:
useful when the bowels
are costive. Adm: 0.0
an empty stomach &
followed by a cathartic.
Cal: is an excel=
ent remedy for worms.

not so effectual as the
[illegible]. For instance if
when there is no inflam:
of bowels. Aloes &
brown and in the dec-
tions, comb: with calomel
is a good remedy. Br=
ichtin for removing
scaridis and the best
remedy.

<u>Tonics</u> - The depurative
herbs with aromatic
infusions - Mustard seed,
[illegible] of iron. Now
wh there is inflam: of
stomach &c these medicines
are contraindicated. The
white mustard seed is
recom: in dyspepsia &
dis: of the liver. it acts
slightly on the bowels.

of particular attention
to Emphysematous temper.
It awakens the torpid
energies of the stomach &
bowels. With respect
to Sulph & Cabb: of Iron
combd: the Emply: use
an inconvenience. I advise
him it in the morning.
I just find it before
dinner & at night
& after a while find it
will be done in the morn-
ing. The system becomes
habituated to its effects
& the employ - or if you
may find as much as
from 6 to 10 gr at a
dose: The Mixtd: you
may Exhib: with the

alterative medicine — In nature of the Metallic Tonics and may be used at the same time with advantage — I shall not be offended if you use it —

External Stimulants — Are it be this mixtured with advantage. You may think it inadmissible in any other way. In this is exceedingly innocuous — it will be by allowance — have no effects almost — little least — You may, in case a great deal provided you persuaded unless you

do excite it to ensebility
Flannel should be worn
next to inflamed parts.
Friction should be
made with flesh brush.
The external use of the
Nitro. Mur: acid bath
should be nitric acid
Tartaric equal quantity of
the acids & as much
water as boil. Then
add it to hot water
& dry it obtain bath as
strong dri it is solution
The skin will bear to
bathe any acid. Afterwards
salt bath will often be
useful. In this way you
give alternately acute &
mild cold & warm bath
This has a powerful effect
in arresting the functions of the skin

Biliary Calculi

The bile is subject to inspissation & the most heterogeneous kind of it resembles a clot. They are of various sizes from a pea to an inch in diameter & they are also of various degrees of consistence. They are never so hard as a urinary calculus. They are sometimes found in the biliary ducts, but more frequently in the gall bladder. With they give excessive pain and produce the symptoms of obstruction. Occurring at the 32 year when he attained the age of puberty. He has been in the Dominion his complaints

Fallow. under the altera
tion may first cause
lying in the gall ducts.
This will be a dry cough &
pain in the biliary ducts will
be eliminated into con:
so as to push them forwards
thro' the ducts. The symp:
are now conspicuous.
In passing this amount
the ducts & into the du=
odenum, it may irri=
tate the tubes & excite a
contraction of a kind wh
will give great pain in
hard nerves felt before.
Jaundice. Stop, ain't it
that time we don't
feel the moving on=
board. The cause is
general in the epipas=
tum extending to the

light hypochondriac. The patient will think he has cholera. There will not always be existing a new pile. The will be chilly, or amounting to a complete rigor. For example: his pulse rises twice from it not much disturbed. It may be slower but often more frequent or quicker. By keeping over the abdomen you will relieve it again. The will now enquire in to patient's former habits & conversation with his present state.

Cause. Sedentary habits, confinement to the house & a want of action in

in the lives. Effort of the mind will tend to give rise to false ideas. This is produced by the mind's effect on the nervous power. &c.

Treatment. In many sup. where will augment the lilian. Re. will have a tendency to remove cal. etc. We might mention cal. or a good remedy. This is one remedy. I have not here to mention to augment &c. of life. This is clear. It must be tapped as near as possible. The duct of the face heated.

The 3d. Kind of remedy is a purge & cath. when we have no doubt of the presence of gall stones. You can easily perceive how essential it is to have stimulate the duodenum wd may be carried to the gall ducts & thus assist in removing the calculi.

The passage of gall stones is attended with great irritation & inflammation may be excited in the coats of the duodenum &c. Believing this, it will be for you to perceive that ds. of cupping & leeching will be required acc. to circumstances. Of

volume of juice habit
ns of weak & debil=
itated you will be aspt
If he be weak-nervous
very irritable-emaciated
you will not dare
to any kind of bleeding-
If no fever, pain &c.
inflam: symptoms are
not present. You
will give opium in doses
of from 2 to 4 gr.-it
will be wise to combine
it with calo. This will
act on the liver-& aug=
ment the biliary secr:
Now after you have
immersed your pat.
in warm bath & you
have fixed & tried &
upon wise ask wh. ever
I will do & always

afte the Ds: no mat: bad
the lim: ramist or
cond: of the patient may
be. If time had Ds: fin
now Ra. frequently
& by sympt: of the cont:
& will ~~be~~ fin: fin
a cath: or an emetic or
an emetic cath:- I wld
endeavour to excite the
functions of liver & skin.-
In the beginning I wld
run fin these. I wld
prescribe other treat: unless
I had in some measure
blunted his sensibility.-
The diaphoretics purgatives
wd then most prudent.
They have a
soothing & tranquillizing
effect.- The castor oil
& the olive oil have been

bad - If the Castor oil he may take a tumbler full - This will in 300 ms may open the bowels -

External app: a warm water applied I have before recommd: as counter stimulus -

Now a question will occur can we adm: any kind that will act on the constitution - When the Surgical Pathology supposed it did say: that there were med: capable of acting on the constitution - Now as it is admitted that medicines may be carried into circ: of the liver

he may not it probable - Rust sulph: either
turpentine &c may as
well be men are com-
mitted to be mixing. Not-
hing may be carried
back to liver & act
on the pale stones -

Remedies -

By this he mean the
decomposition of bile
into the blood & cords -
It may be sporadic
or epidemic - generally
sporadic - yet it has
been at times epidemically - Hence warned
men may cert: states
of the atmosphere prevail wh will affect the
liver -

Symptoms - a yellow

of eyes, & tin. urine of blood - urine - nausea constipation. bad formed feces, indigestible - muscles weak - irresolution of purpose &c. You will hear of black & yellow jaundice. The yellow is easily cured. The black is in some degree offensive formed & more formidable. If you refer to what Dr Melancy said you will understand how this form can be caused. The liver may be incapacitated in this disease to the bowels. Acts

the cattle will consume
other kinds of jimsonweed.
Small doses in the last
stage of the disease
the gall duct will obstruct
the bile & it will then
be carried into the blood
& we will have a jaundiced
appearance. A fatty
degeneration of the mesenteric
glands has been found
when the gall duct is
not so, perhaps again
retain it in the liver
& it will be often the
congestion. In cases
of the gall duct or
the hepatic duct. When
this is the cause the urine
will appear under
dens. In England
& the Indies many of

Sphincter in lapse of
face duct as to prevent
the flow of bile - or -
it gives a retention of
large accumulations
of feces in the bowel -
This is apt to occur
in pregnancy - Yes
it will occur at this
period - I will here
observe that during
intoxications the
is acquired great bil-
iary disl -

Treatment - As the
causes are various - so
your treatment will
be various - You will
treat for the offending
& relieve it as you will

The Dis: of the liver - Attend always to the primary Dis:-

You will often be at a loss to know what is cause & effect - hence the practitioner is apt to be misled. By keeping up a constitutional tonic with no stimulant consideration. You will also find calomel & rhubarb - but not so as to salivate.

Bowels when there is torpor & constipation - will be benefited by this class - The best cathartics - Columbo - Gentian - The mass in Lib. Inspect the stools & observe how & in what it consists

Lactic acid - but is an
Narcotic.

By long well filter obtain benefit from the exhibition of antacids.

By exciting the action by friction &c in often do a great deal of good.

Chronic Disturbances of the heart & lungs &c.

You are aware the thorax is an enclosure, muscular & osseous & lined by a serous membr. That the cavity between it & the abdomen is a musculo tendinous membr. The pleural cavity is dilatable &c. The cavity of thorax mainly filled by the lungs consisting mostly of vesicles.

o cellular tissues & three distinct
kinds. It is the secretion of
the st. wh makes up the lungs.
In the pleura you saw the
great artery, the pulmonary.
The pulm: veins wh may
be compared to hepatic veins
then you have the bronch
ramifications - terminates
in air cells & these have
intimate position with other
tissues. You then have
a small intestine artery
wh may in some respects
be compared with the ren-
alis. The lungs are supplied
with nerves by the great sympa-
thetic. The heart is situated
between the lungs - coni with
the lungs, pul: artery & veins
&c. &c. The heart & lungs
are coni by nerves by the
cardiac plexus. There arises

from the lung the trachea.
Its ramifications are called
the bronchia. As the trachea
ascends it is terminated by
the larynx. The opening of
wt is called the glottis.
In inspiration the lungs
& ribs are enlarged. wt
admits the air to rush into
the bronchial tubes thro'
the larynx & trachea. after
thro' the ribs &c are expanded
contraction takes place
& the air is expelled or any
part of it. 60 or 70 times
in a minute the heart con-
tracts & sends the blood to
the lungs. It is thus
returned to the left side
of the heart & then de-
If you obstruct the
passage of air thro' the

glottis & air will not be admitted into the lungs & the action of the heart will cease. Divide one of these organs & you destroy the other. The veins carries black blood while the arteries carry red blood. The blood in the lungs is changed in color. We know that air is admitted into the lungs. The changes in the lungs is not dem. but the oxygen is & we find in its stead carbonic acid. We seem to be formed in the blood. It will seem the just funct. of the lungs is to eliminate the carbon of the blood. It of not removed becomes a poison to the system. This is one of the grand funct. of the lungs & indeed the only one

They are found just:
subordinate to them:
If desire to cough is
one of these & sneezing.
in nares were excite
a full respiration & it
will be forced out violently.
But in the glottis or organs
of voice with excite coughing.
If in the trachea &c.
in the nose it will excite
sneezing. Now will these
the coughing & sneezing have
nothing more for their
object than to remove
the cause that is may
not impede the function
of respiration. This seems
something like a conscious
rational nature. to prevent
these derangements.
For simply if sneezing is
destined to remove the irritant

circulating body.

The act of breathing is dependent on the organs of respiration. As respiration fails the faculty of speech also fails.

The act of vomiting is mainly dependent on respiratory organs. So of evacuation of urine & fæces. The action of the penis & testicles &c. The descent of the diaphragm is the most considerable aspect in which it descends in bearing of the food is enlarged. The abdominal muscles contracted &c. &c. Thus you see the dependence of these organs on the respiratory organs.

The nervous genital & respiratory demands your particular attention.

This depends upon the contraction of certain muscles - These must it is evidently concluded. There are reasons that con: the nares - the organs of voice - & with the respiration of the lungs.

The mucous surface of the bronchial tubes has in it a sensibility - something like that of the stomach for food. It has a strong desire for air when long deprived of it - There is likewise a desire for air for these membranes. Now may admit various doubts & not minute inq: will be conducted. Yet there are reasons that act powerfully on it - The lungs have a discriminating sensibility. The refuse or thing of stem-

ulus & admit another. These are facts, which will be hereafter of important to you.

The anatomical structure of the lungs is closely connected with that of the liver. They both transforming & excreting & secreting organs.

What are called the vesicles are principally the organs of the mind & wisdom. & as you attend to them ~~organs~~ this in the abdomen, this may affect the lungs. & of the various ways in which the portal veins may affect the health of the mind. When the heart & lungs may be both affected thro' the nervous connections. 2dly by excessive digestive quantity. The products are exhaled

of the producing plethora & congestion — which will excite the lungs & heart & nervous system which will in impair the whole system —

3rd by the stomach absorbing unwholesome gases or poisons into the blood which excite the heart & lungs. It is well known how fast it is exhaled in the urine principally & part after its exhalation — In 4 or 5 minutes it has been detected in the blood — It is in this way that fat may be absorbed by the veins of the stomach & then put into the heart &c. Hence it is some persons after eating are most disposed to cough after eating &

especially after having taken unwholesome food.

4th by the formation of unhealthy chyle from imperfect digestion. This chyle when it is sent into the lungs & heart will act as an unnatural stimulus.

5th Dis: in the mesenteric glands by their not performing properly this function in the formation of chyle &c.

6th by the liver not sec: bile & leaving its elements in the blood. Whenever the heart & lungs are irr: & in the general organic dis: will be developed.

7th - By the liver in jaundice not excreting bile & then the bile is absorbed into the blood

8th By enlargement of the lungs preventing the descent of the diaphragm & thus affecting respiration.

9th By disordered stom exciting sympathetically in the lungs. cough - hence it is not uncom. for indigestion to induce by cough.

10th By the tendency of the bile in the blood, this ~~[illegible]~~ to excite increased secr. for the serous membr. - functions is to Hydrop. pericard. Dia - Hydrothorax &c -

We must come to consider the tendency to excite

Dis: the aff: of the lungs, lead to the abdom. viscera. by the heart not being able to transmit the blood - & hence congestion will take place in the vena cava. Hence it is not will have great acc. in the ascending cava. giving rise to congestion in the abdominal viscera. Malaria may be brought on in this way 2dly by sympathy.

3dly. If heart wk dis: manifestation dis: in the portal viscera. by throwing blood by its excess action unnatural to them & thus exciting inflam: actions.

We con. to consid: the morbid infl: the heart

the or the lungs 1st by
sympathy by being con-
nexionally

2dly by dilatation of the
right side of the heart.
When this will become thin
& distended it will not
be able to send the
blood along the pul-
monaries.

3dly a violent action
in the right side.
By producing hæmoptysis
or apoplexy of the lungs.
by effusions of blood in
the lungs.

4thly by ossification
of the mitral valves. by
preventing a free passage
of the blood into the left
side & hence causing con-

gestion &c &c.

We now come to consider how the dis: of the lungs may affect the heart 1st. by sympathy.

2ly by organic lesions in the lungs & the blood accumulating in the lungs giving rise to pericarditis.

3dly The lungs may affect the heart by a failure of the transforming function. The heart then will receive an unnatural stimulus which will excite in it dis: by debilitating its energies & overthrowing its vital properties.

This is a subject of the deepest interest to the physician & deserving that may

of the dis: are found situated in these two cavities - the thorax & abdomen. Gentlemen, I indicate it to you as a subject of deep consideration - think of the connection of disease in these organs - their various sympathies. their different modes of affecting each other &c &c.

<u>Cough</u>. - Coughing is a natural function - not, however habitually but occasionally to expell something from the lungs or from the aerial passages - the air is driven out forcibly &c. There is all in coughing a rapid dilatation & contn of the thorax - & ~~[illegible]~~ expiration

of this cause is so
bracing. The mucous mem-
brane of the organs to be relieved of
the mucous accumulated on
it. This for it is a healthy
function. But when it becomes
constant it depends on an
irritation existing somewhere
in the system which
exactly is convulsive action
the respiratory organs. To
arrest this unhealthy cough
it becomes us to inquire after
the cause

<u>Cause</u> 1st. Inflammation
acute or chronic of the
lungs, bronchia or the invest-
ing membrane of the heart or
the pleura of the diaphragm or
the liver or of its appendages
& I might add of the
gall bladder. Hence coughs
is a symptom of pneumo-
nia consumption cancer
pleurisy <u>hepatitis</u> &c &c

2dly may arise from effusion of serum as in hydrothorax anasarca &c

3dly by enlargements of the uvula palate &c in the fauces

4thly foreign bodies entering the trachea glottis or resting in the trachea bronchia &c persons working in dusty places are liable to cough &c but may give rise to this

5thly by some enlargements of the lymphatic glands glands situated in the mediastinum &c pressing against the trachea &c are observed in their accession &c to the office which brings cough & you will find it so

to detect in cases.

6th Organic Disease of the liver & spleen. Dis-
is the liver you will
easily detect.

7th Irritation in the
stomach from acid &
worms — Dyspepsia Dis.
diet gives rise to cough.
& may produce an
organic dis. of the lungs
or heart.

8th Cough may be
excited by affections in
the brain. Ex remarkable
instance of this kind &
well recollected. This cough
in the brain is conveyed to the
lungs, by means of the
par vagum.

Often you will see
an this is presented to
you as a symptom of

of Mrs. Dis:- you will
understand why I have not
fully presented it
to you. But it is
certainly well thus to
consider it.

For heat a cough then
as a Dis: would be about
the worst all: draw out
the cause of irritation.
In generally as soon as
the sorrows the dis: we
can the cough. Often
it arises from nervous
debility we will endeavor
to ameliorate it

Pertussis. The morbid
act: is situated in the
lungs. In the mild the
cough is spasmodic -
at fortnightly - as if

a woman becomes nervous
commencing to complain
she is a decided person
hopeless. after this is
positive certainty. there
is a slight bloated appe-
ance in face & eyes. On its
course it resembles exci-
bronchitis or Hydrothorax
It is prot: for many
weeks - & is apt to rec
cause for months afterwards
Generally a sequ of childhood.

In this Dis: you will
observe there is no vomit:
of the pneumonic or other
form is an invar. in the
stomach. & in all its
extremities.

<u>Causes</u>. It frequently
occurs in acrid poisoning
Mostly considered contra

ous. It seems frequently prevailed epidemic & often by contagion. This is one of those dis: wh always persons without one - but I have seen it occur often in the same persons.

Treatment. In the early stage of the dis: when there is fever the vein bled: Emetics are very useful - Antacids will afford relief - Calc: phosph - Tincture of aralia - Ipecac. Sulph: or acetas Morph. will well palliate the malady. Assafoetida & garlic - sulphuric ether are beneficial as anti spasmodics - bleeding over the heat of dis - & upon other always end:

to irritate the bronchial tubes & lead to con=gi=
& inflam. when they are developed therefore
your best to prevent=
ions.

In the latter stages
wh the infl. is removed
& the cough returns & can
medically be alleviated
irritations use juice:
allow a generous diet.

<u>Asthma</u> or, calculous
<u>dyspnoea</u>. This life comp.
may arise from many
causes. Obesity. Obstruction
of the vessels & lower throat
it produces. <u>Dyspn</u>: comes
most ofty be aroused. and
dis: but a dyspnoea com on

Phys. E. Helmuth on
Paralysis Cancer. Dr
Philip in his experiments on
the Nerves with galvanism &
the detailed many
cases of Hydrophobia. Dr
Conrad: that this depend
on morbid action in the
hair follicles. I suppose
then that in fact asthma
we should use Galvanism
Apply one pole of Sal:
ladle to the sequence of
the nerve to be experimented
upon. In this way
we relieve it. If one will
Al: seek out the causes
I have for a long

Asthma This is a
disease of great difficulty. It
is the chief evil of this or
any prevalence. We observe

a cough, dyspnoea &c
from various causes. Dry
asthma. I hence Dom. has
wished to exclude it from the
list of diseases. Yet well
tried that this term is
used in many of the books
to designate difficult breath-
ing. But I am compelled
by symptoms and diff. to
consider it as a dis. It
may sometimes go off
without any organic
lesion. Yet in all per-
sons organic lesion will
most freq. be found.

Do Bres masks & spec.
They may be dis. in both
dry & humid.

1st. The dry this is
the
a
reason of some lords
pneumonia is short
without the great lose

obstruction. cough dry - little expectoration. little mucus - every thing above the chest is dry & constricted

— The humid. The pain gradually becomes more & more violent. The anxiety is more protracted. The cough above the chest is humid & severe. cough more out. expects at first mixed - but at length a serous liquid & is more abundant.

In both there is an irregular action of the muscles of respiration - This accounts Dr. B. is not characteristic. Others believe it consists in a spasmodic contr: of the inspiratory tube. - There

chemically opinion. At
the same time it is evident
that the muscles are affected
spasmodically.

In the dry asthma.
The bronchi & lungs
thickening are very sensi-
ble to the effects of foreign
particles in the
cold atmosphere. A
person disposed to such
disease will always have
a paroxysm of asthma.
I have seen many persons
so disposed could not
go near the fire when there was
snow.

In humoral asthma.
There is an increased se-
cretion of mucus. Upon this
disease depends. Others

that the dis: depends on
the liability to increase
dec: the pancreas and
lost: for months a
week or more - all the
time the pat: is compel:
to keep a strict or
sitting posture - Cow
will seldom find on:
pence lesion in this dis:
It seems to consist in
funct: derangement.

In most cases of
hemid asthma there is a
state more or less of the
heart vessels of the lungs.
This seems to constit a
state similar to that
we are prid in the pow:
like air: it has been
proven itself by an increased
beat of the.

In the lungs it is the
mind & nervous sys:
of nervous.

, the asthma when
forming in the system it
will be aggravated by a
retreat of the nervous &
nervous fluids from
the cutaneous surface —
& in this inst: they seem
to darken the lungs, & give
this sensible place.

It is often hereditary —
An unhealthy state of the
lungs may, from poison
flow to this disease, or the
lungs exposed to cold
& will excite a paroxy-
sm. It will be impos-
sible to hand out all
the causes of Asthma

close affinity between
this Dis: & ope occur into
Dispepsia - comes on with
it & with it disappears.
The paroxysms of the
disease I have seen
brought on by stress. The
disp: with a tendency
to produce this Dis: we
can easily understand.
The stomach may be
disp: habitually to exer-
cise an affect: over the
lungs. If excites the bron
the pancreas secreted -

As Mr. Wh. et al.
is so from indigest: we
be satisfied with that
Dis. Per. of the asthm.
will cont: with violent
fit of tacac - lent
generally ceased -

It is apt to give rise to
the dis. Pl. Pleuris. effusion
of water. Dis: of the heart.
Accum: of the liver. &
enlargements of the or:
gans. & in this way
general dropsy may be
induced. In the same
way dis: of the heart
springing up. The organic
dis: opel: and it is some-
times looked upon the
primary dis:. & it will
be found as consequence
& not cause. To this
subject I shall again be
occasion to refer

Treatment. I dont
so much aim at en=
tirely as palliate as shorten
ing the paroxysm &
keeping it off. Amen

We must end: to ascertain what causes act in as local situation. Diet. &c. As to local situation we can determine but little a priori. We must attend to the disposition of each particular case.

So of diet. Many kinds of diet exist in one wh have no effect in others.

When as Nova dont lead wh fact: among all an evolving causes - that is spontaneously. There is something peculiar in periodical dis: Nov Phys which disappr: & yet "prodrome" appears any "obvious cause". Now

when they do occur in
this man: he will cont.
for a long time. & finally
he will die from some
other dis: set up by it.
We may do much good
in mitigating the paroxy=
sms. By some conje=
ture &: & inspiring con
ln used. Tho' you will
not prize so much ben=
efit from it as you hoped lay
expected. Often by the paroxysms often
recommended. The dis: is
not an inflam: but a
kind of morbid action
then set up independent
of inflam: tho' M:
cant determine it.

2dly we will endeavor
from the observation mentioned
acc: we often excite the
paroxysm. to effect the

emetics
an well admi- basis
tis Pni Ors: in evac-
uating the stomach, the
agent a specific act
tion on the lungs. Em-
etics act as stimulants to
the mucous mem. of the lungs
&c.

3rd by adm: of cath:
especially Mes: cath. &
those wh act on the
liver, diaphoretics &c.
Oil is also prescribed wh
quantity of bile will
be evacuated by emetics
& purgatives. Don't alt-
tempt anyone w you have
lent be given by the
Ap: it will be mean
thing the cause solidity.
This is a case a remedy
than a primary cause

Copiam Lumbi is not
one of the best remedies.
You will understand.
when they act on the
bowels bowels &c.

Lastly you will find
antacids to correspond
ing when it is found to
exist.

You will endeavour
to allay the spasmodic
acts of suffering or-
dinary in a celoration

Opium 1½ g
Spiraeae 4 gr
Resp: acta. Dij.

Then is alkaline - Mag-
nesia & antacid combi.
fin in four doses or
you may for the fol.

Opium 1½ g
Musk x.gr.
make & divide into 10 pills

Oct
℞.
Opii . 119
Assafœt:- 24 gr.
Mucil: Acac:- ℥ss

℞.- Sulph Æther ℥vi
Tinct opii ℥i
Alcohol - ℥j

Dose teaspoonful — All the narcotic remedies will be used sparingly -

We may attempt to promote expectoration by free use of Rose Mixt: may be dissolved to. I will for you some formula Tinct: Lobel. ℥ss Always in infusion of liquorice fortis Acet: to ciss: -

℞ a teaspoonful of syrup of Ipec.

Lac: Am: ℥ij
Syr: Sipo. ℥ij
Paregor: ℥ij.

Or

Cac - 10 gr
Pul: Squill - 24 gr.
Mix & divide into 8 pills
Act these formula while
the attack imminently will
increase the expectoration.

Opium 1 gr
Ipeca: 8 gr
Cab: Am: 16 gr.
Div: into 8 pills - give one
to commence - or more in
Vi: Ipeca: ℥j
Paregoric ℥j
Amm: Alcohol ℥j - dose teas-
spoonful - pro re nata.

The formula will prove
in extreme kind of asthma.

The steam of coal or
coal mixed with Anacar-
diac - or ep of vinegar

3.6.2.

I m be resorted to in
cases of em

We may use blisters &
vinegarms as counter irritant
Issues in the case may
ward off the paroxysm.

All I have said has
solely related to a pal=
iative cure. We of no
specific know when the
Dis: has invaded the
period of middle life.

1st By avoiding all
the exciting causes. 2dly.
By the use of prep: of Iron.
3 ly By the use of vege=
table bitters These may
be combined with the
prep: of iron. The cold
bath during the absence
of the paroxysm often does

good - will arrest the paroxysm in their recurrence -

<u>Asphyxia.</u> This cond: arises from drowning, hanging, from breathing mephitic air & from lightning -

In all these cases the dis: is essentially a malady of respiration - These are the functi: suspended - When an individual is submerged or hung, the air is excluded from the lungs - Take the patient from the act: & the pulse will still be beating - but will become more & more feeble - Now death seems to be caused by blood & the unpurified fluid received into the heart & thence sent into the whole system - The heart does stop to beat

when the heart see the black blood - but given this blood being sent into the heart, half-into the brain, spinal marrow &c. The blood is no longer aerated &c - & consequently unfit to support animal life.

If we suffocate animals submitted to immersion &c. the animal dies apoplectic - when this takes place suddenly he does not but when he dies gradually he dies apoplectic - When a cord is applied around the neck of the carotid the blood is cut off from the head - now if the heart still beats & the lungs have escaped

prevent the blood from flowing to the brain it is evident that he must die apoplectic-

The practice in suspended animation has been uniform & empirical & utterly unsuccessful- The great indication is to restore the respiration if this be soon done it is clear the person may be saved. But if the functions of nerves & heart be in some measure lost- it is not probable we can effect a resuscitation-

The first effort we are to make is to inflate the lungs- The bellows are recommended- by Hunter &c-

In every instance in wh I have used it I have found the stomach so inflated - we cannot prevent it by using any kind of pressure on the oesophagus. The contents of the stomach will be forced up the oesophagus by the admission of air. Another mode is to perforate the top of the larynx or thy. The venous vessels are now engorged & in performing the operation. The blood will flow into reached & will put an end to all hopes of returning animation. The best plan is to introduce a

tube into the larynx - the
chordæ of the tube of the
the ovum obtuidzi. This
tube we may inject
stimulating vapours - or
blow with our own mouth
At the same time two
lines end: to unnatural
respiration & exciting pus=
sure on the ribs & epigas=
trium - &c. It was so, but
relieved in any of your
attempts. This respi=
ration is from being nat=
ural. The muscles don't
act - the diaphragm is
unsecured &c. The change
on the blood don't take
place - the air comes in
contact with the bron=
chial tubes - the chemical
changes don't come

take place. I do not put much confidence in these evacuations at inflation - Tho' occasionally it seems to have done good. The irritability of the mucous may be removed by antiphlogistic desquamation is made by the obstruction of air into the mucous membrane of the bronchial tubes -

Ergo a cow medicine to resist an asphyxia - Only when you have good reason for supposing the brain to be congested and you see under circumstances you may cup the breast or

Smart has been said

Albany in ap: of heat to persons in asphyxia. In cases from suspended Animation from lightning we are fretted to use copious affusions of cold water & when it occurs from breathing deleterious air when it occurs from drowning we are to use warm applications. They are improper in cases from cold, in lightning &c. & why shd we admit them in cases from drowning. When an individual is in a state of asphyxia from drowning shd not use warm applications. This & recom: from theoretical views. Persons subj: asphyxia from

drowning resembles those cases from cold - I would not prescribe warm air! - I would alternate it with cold - cold & heat thus alternately used will give rise to the most powerful excitors of the suspended energies of life.

Tonic friections are useful. Whipping with nettles & beating with mallets are sometimes found to be beneficial remedies -

Stimulants introduced into the rectum & stomach will often excite some action in the system on apoplexy -

Electricity has

been known from the
man in which it excites
convulsive contraction
after death we might
expect an impact that
from it. Tourtual experi-
mented does not seem
to confirm this opinion.
Shipset thought, that the
tapping along in the course
of the pneumogastric nerves
at short intervals, for
2 or 4 hours.

In all these cases it
will be more expedient
duty to drive off all by
Opandery & let the patient
have a free passage for
air &c.

Diseases of the circula-
tory function.

This will be confined to

effect of the inflam. matter
on the phlegmasia, &c.
complete effect of which
includes the effect of the nerves
& derangement circulation,
as of digestion & these being
so closely to be considered of
strange of these modifications
will the same considerations
above cannot appreciate
too fully the importance of it
in the treatment.

Before comm. the consid.
of the dis: can with consid.
first function: the anatomy,
physiology &c. The function
of air: is one of universal
extent being found everywhere
where life is a function to act the vital life
a process of life to act the
system. The air: of the blood
should be considered ~~that the~~

to the students of med.
Rose you are well furnished
with the fumatic. that spec-
ell have a drop of blood
shed in apoplexy.

The influence of nerves
on the heart. The heart is
supplied with nerves from
the brain, spinal marrow
& the great sympathetic.
Does the heart derive its
contractile power from the
nerves? This is an undecided
point. It seems to derive
its power from the blood
circ: in corresponding respects with
its nerves. 2d relation
of nervous influence is the
action of other organs upon
its action. 1st & 2d. Pneumo
gastric of the great sympathetic
Stomach. If you abolish the
nervous influence upon both
have more but the influence

the result, lastly. The various organs require a uniform supply of blood. They are able to perform their functions because they are accustomed to a ordinary supplies of blood. They also must now be found to contain the heart at certain times to throw out an increased quantity of blood. That this is thro' the nervous connect. & this is obvious. If this be the invitation in the extremities of the fulcrum, then the heart will be acted upon. Now this must be with the nervous system rational system. If we reject the influ: of the vascular system we must admit the nervous connection.

No one can be considered a good stethoscopist until he has become acquainted with them in a degree so distinct [illegible] [illegible] effect an accurate diagnosis. The [illegible] is affected thro' the nervous system. If there be great excitement in the mind the heart will beat with unwonted energy. The passions have a powerful influence on the heart. Different states of feeling excite different [illegible] heart & this is thro' the means of the nervous system.

The nervous system has an influence on the circulation in this way. The vessels are supplied with nerves [illegible] this cause the[illegible] in addition there are many connecting filaments. The [illegible] [illegible]

branches to the reflex
having their trunks. Many
of the nerves of the animal
~~are complicated in the~~
come off from the encephalic
plexus. It seems to be
demonstrated that the
reflex, spinal, and
abdominal ganglia are
nerves. Several parts of
the body from a sensibility
of a peculiar kind. Little
but lakes, pieces are
the necessary accompanied
in plant. Examples of this
kind are afforded by
the ganglia of the right, posterior
in muscles. In the
digestive ganglia in the
intestines. Hence we see
the close connect: of the
nervous & vascular sys-
tems ~~[illegible]~~.

Symptoms of Diseased function of the circulating organs.

In proportion to our knowing of the animal economy in health we have become acquainted with its deviations from that state.

The 1st class of the morbid appr: are the changes in volume or of the parts which are affected such as any anomalous dev: from size indicates either hypertrophy or excessive growth. Or depositions of fat. Or effusions or extravasations of blood. The process of serous secretion being in excess. Or congestions or accumul: of arterial blood or from accu: of venous blood, or from defective absorption. From under this, we will be able give a just conclusion when we are engaged w/ the cond: can give rise to.

Diminution of a part.

1st: May arise from atrophy

2d: from defective circulation

in a part as when a part is exposed to cold it becomes shrunken &c.

From the causes which diminish or increase the vigor of parts we proceed to consider the changes of colour that occur in parts.

1st By acc. of arterial blood give rise to a florid hue.

2d From venous acc. giving a violet or purple complexion to the part.

3d Deficient inhalation or diminished absorption which induce a pale colour, may give to the lengthy phlegmatic appearance.

These complexions will be of great importance to a practical eye.

Use same changes of temperature. Increased warmth arising from increased action of the circ. of a part.

2d. change of temperature may produce defective heat-producing that the circ. is not carried on actively in the part.

Changes in the sensation of parts. 1st Indicate to us excessive arterial action, giving rise to pain & acute sensibility. Hence by diminishing the accumul. in a part you lessen acute sensibility.

2d. Defective determination of blood to a part, evincing diminished sensibility.

Changes in the amount or quantity of secreted fluid in an organ. 1st Indicate excessive determination of blood giving rise to increased secretion of the organ.

2d. diminution in the amount indicates defective secretion in an organ. In this three cases we ex-

exertions. A great supply of blood to an organ may subvert its secreting function & transforming power. Or it may cause, a small determination will find rise to increased secretion.

Changes in the quality of the secretions of an organ 1st. afford evidence that the supply is either increased or diminished determination. The organ becomes dried & hence its functions will be marked.

Extraordinary vigilance or drowsiness or coma alike indicate engorgement of the brain. From acc: of venous or arterial blood. Yet these acc: be carried beyond excessive exciting & you will have coma & stupor.

Probing of inspiratory movements in a heart indicates increased action in a heart with excessive sensibility of a heart.

Such are the principal signs of disturbed of the functions generally of a heart and derangement. There among the some natural principles of association then a swelling will be attended with pain flood colors, augmented heat & perhaps throbbing - if defects deleterious will be indicated & demanded revolution heat, sensibility & of the natural colors - hence you see on being called for a person in serious acc: the will be a violet color or not materials altered - the will be determined sensibility & heat of the heart - Now suppose the be acc of serious - there will be demonstrated sensibility - paleness - defects deleterious this constit: the ocdemalous state occasionally some the other condition may be present in a heart

In coma the will be increased
heat about the head. In the
case of Dis: of the brain which
arises from serious acc: the
arteries will be induced to
increased action, exciting heat
&c.

The most important signs
are afforded by the pulse. In the
small ones the pulse cannot
be detected. When they are owing
to a certain we cannot feel
the arterial throb. being synon-
ymous with the pulsation of
the heart it is evident that
the phenomena depend on
the heart. How the arteries co-
operate in forming the pulse
we dont exactly know. The
best opinion wh has been form
is that which attributes the pulse
to the impulse of the blood on
the cardiac orifices of the ves-
sels & their sending it along
the tube. This united with
the dilation & contr: of the ves-
sels seems sufficient to

ment to explain the action of the pulse.

In the state of heart and vessels we be relied on. but in this we can too long rely on one. we must compare this with the and with the sensations of the heart itself. This examination of the pulse is a sound diagnostic & prognostic indication. The and many states of the pulse in the body, wh I found in practice were being able to discover.

The following states of the pulse seem suffi: characterised 1st a frequent pulse wch refers to its occasions. 2d a quick pulse refer to its action 3d a slow pulse. 4th an infrequent pulse combined with frequent. 5th intermittent pulse. 6th a quick pulse. It may be hard full or hard. 7th a small pulse when it is weak constant a tremulous pulse. a small & weak seems to

tends a vermicular. Suppose a pulse is small & not full this could. The wiry pulse.
8th The soft pulse when it is easily intermittable. By the suppose it act. more easily & by the system contract the arteries acted feebly & would be enlargened. If it easily compressed it is evident it is not enlargeed by the heart. hence you see the arteries have a good deal to do. 9th a hard pulse shows the force of circ. diseases concentrated in the arteries & not easily compressable. 10th a tense pulse. 11th a strong pulse which resembles the state of heart.
12th An elastic bounding, irritable pulse frequent & easily propelled. One of the most interesting is your attention. because its influence: when you B. to it you think you feel carried thro far enough it pulse state ~~disagreement~~ full & bounding, now would

inquire shall you find
unless you depletory means
in the first place & avoid
running into error respecting
it. 3d. The depletory
effected pulse is sometimes
the opposite of the last. Opt
a very feeble & strong & de-
lirious. When you have this
pulse you have one of the
two extreme opposites in the
brain especially the active
or the heart or you have
both opposites in the heart
itself. If you have acc
in the heart from conges-
tion in the lungs & you
will have two cavities
in the heart & its substance
in a chronic state. At
the same time you are
have accumulations in
the vena azygos & as a
consequence of this a con-
traction of the spinal mar-
row. Now under these c:

I say if under Medicine! If you take a way blood from the circulation you will relieve the action of the heart - 1st. The strong pulse - This is an alteration in the ~~rhythm~~ & force & frequency of the pulse - All these may be jumped or undulated. The pulse may be full, frequent, soft & hard - A pulse may be frequent quick & soft &c. The pulse is seldom very full & very hard or very quick & very frequent or very slow & very hard - but it is often frequent & small. When it is exceedingly frequent it in general gives indication of a state it does not admit of such debilitation - A full tense pulse indicates an

ratitude exhalation of the
system - when it is intermit-
tent is symptomatic of a fever de-
pending upon a state of
the arts. If you de-
sire the circulation, so
necessary in filling the inter-
stitial spaces the entry of more
more healthy status has
to other - Hence you will
be deceived unless you feel
the pulse in both arms. The
position of the arm must
be attended to - Keep it
relaxed & free from all
pressure. The compression
of the limb must also be
attended to - If the arm
has been extended out of
the bed clothes - Position
of the patient effect the
pulse - it is always
more active in the erect
position - In the decumbent
position the pulse will be

diminished in size & frequency. The passions & emotions of the mind increase the frequency & sometimes the force & at other times decrease the force of the pulse. During fear & fright the pulse will be accelerated. This is the Hysteric pulse. A new emotion rises in mind up after the emotion of fear has passed off. Before the invention of certain modes of ascertaining the state of the heat we depended on the emotions of the pulse to tell us of the condition of the heart in diseased or healthy states. This is now ascertained by auscultation & percussion. The lungs are now examined in this same way & we could not have been made.

13 Blank Leaves Not Scanned

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